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Lombard 1810-R

Mailed: September 1, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Edward J. Schwoegler, 39, former technical director of Nox-Rust Chemical Corp., Chicago, has joined the staff of Armour Research Foundation of Illinois Institute of Technology as a research organic chemist, Clark E. Thorp, chairman of chemistry and chemical engineering research, announced today.

He was a research chemist for Sharples Chemicals, Inc., Wyandotte, Mich., from 1938 to 1942 and was supervisor of the organic research division of Wyandotte Chemical Corp., in the same city, from 1942 to 1945. For the following two years he was senior technologist for Sinclair Refining Co., East Chicago, Ind., and in 1947 he joined Nox-Rust.

Dr. Schwoegler received his bachelor's and doctor's degrees from the University of Wisconsin. He is a member of the American Chemical Society, Sigma Xi, and the Wisconsin Academy of Science, Arts, and Letters. He holds several patents and has published many technical papers.

He is married and has four children, Paul, ten; Mary, eight; Ruth, six; and David, four. Dr. Schwoegler and his family live at 114 Summer street, Hammond, Ind.

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September 5, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- Registration for the fall term at Illinois Institute of Technology will be held from September 11 to 15 for both the day and evening divisions, John P. Makielski, registrar, has announced.

Evening undergraduate students will register from 6 to 8 p.m., September 11 and 12, while undergraduate day students, with the exception of beginning freshmen, will register from 8 a.m. to noon, September 13 and 14.

Beginning freshmen will register from 8 a.m. to noon, September 15, with graduate students registering the same day -- day graduates, from 1 to 3:30 p.m.; evening graduates, from 6 to 8 p.m.

An orientation program for new students, consisting of tests, lectures, counseling, and social activities, will be held throughout the registration period (September 11 to 15).

Classes for both undergraduate and graduate students will begin Monday, September 18.

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Mailed: September 5, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Ellery H. Harvey, founder and past president of the Association of Research Directors and former director of research at Anheuser-Busch Inc., St. Louis, has been appointed professor of food technology at Illinois Institute of Technology.

The appointment, effective this fall, was announced today by Milton E. Parker, director of the food engineering program.

Harvey served as research chemist for Swift and company from 1926 to 1927; director of laboratories for Montgomery Ward and company, 1927 to 1936; chief chemist at Wilson and company, 1937 to 1941; and director of research at Anheuser-Busch Inc., 1942 to 1946.

Following World War II, he was awarded "the President's Certificate of Appreciation, for outstanding contributions to the Office of Scientific Research and Development" for government sponsored research on plane crash sea-marker dye, camouflage paints, corrosion-preventive enamel for canned foods, and other projects.

Since receiving his Ph.C. and Ph.M. degrees (1916 and 1921) at Philadelphia college of Pharmacy and Science, he has earned five additional degrees: A.B. and A.M. at Bucknell university, Lewisburg, Pennsylvania (1923 and 1924); Ph.D. at the University of Wisconsin (1926);

-more-

Ch.E. at Bucknell university (1929); and LL.B. at John Marshall Law School, Chicago (1932).

Harvey is author of numerous papers and holder of many U.S. patents. He has been a professorial lecturer in the chemistry departments at Illinois Tech and Washington university.

He is a member of the American Institute of Chemical Engineers, American Society for Testing Materials, American Oil Chemists Society, American Chemical Society, and is a fellow of the American Association for the Advancement of Science, and a charter member and past president of the Institute of Food Technologists.

Harvey will also direct sponsored research and graduate studies in food engineering at Illinois Tech, the only college or university in the nation offering degrees in this professional field.

He lives at 987 Ridgewood drive, Highland Park, Illinois.

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September 6, 1950

Mailed: Immediate

FOR RELEASE:

CHICAGO -- Roy B. McCauley, Jr., track and cross country coach at Illinois Institute of Technology, has resigned to devote full time to teaching and graduate study at Ohio State university.

McCauley, also assistant professor in Illinois Tech's metallurgical engineering department, has been appointed instructor in welding engineering at Ohio State.

In 1945, McCauley guided the Tech team to victory in the Midwest Intercollegiate Track championship and to individual wins in the Central Collegiate and the National Athletic championships. In the same season, the Institute runners placed in both the American Athletic Union and the National Collegiate Athletic championships.

A track star himself, he set two Midwest records in track and field during his undergraduate days at Cornell college, Mt. Vernon, Iowa, one for cross country in 1938 and in the following year, for the two mile run.

McCauley earned his bachelor's degree in physical chemistry at Cornell college in 1940 and his master's degree in metallurgical engineering at Illinois Tech in 1943.

He is married and has two children -- Roy Barnard, III, seven, and Paul Thomas, four. The McCauleys live at 2216 Cedar road, Homewood, Illinois.

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Mailed: September 6, 1950
FOR RELEASE: Immediate

CHICAGO -- Approximately 600 beginning freshmen and advanced students will enroll this fall at Illinois Institute of Technology, Fred R. Travis, director of admissions, said today.

The total is expected to fall slightly off that of last September when the Institute admitted 875 students who had not previously attended.

From September 11 to 15, all new students will participate in an orientation program consisting of tests, lectures, and social functions. First-term freshmen are scheduled to register from 9 a.m. to 3:30 p.m., Friday, September 15.

New students with advanced standings will register from 8 a.m. until 4 p.m. Wednesday and Thursday, September 13 and 14.

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Mailed: September 7, 1950

FOR RELEASE: Immediate

CHICAGO -- Illinois Institute of Technology's evening division will offer 247 undergraduate courses in 21 fields of study and 58 graduate courses in 14 fields during the coming semester, Stanton E. Winston, dean of the evening division, said today.

Undergraduate students will register from 6 to 8 p.m., Monday and Tuesday, September 11 and 12, at Technology Center, 3300 South Federal street. Graduates will register from 6 to 8 p.m., Friday, September 15.

Dean Winston estimates that the new semester's evening enrollment will equal or surpass last year's total of 4,500 students. The reason, he explains, is the proportional increase in curricula.

Courses, in addition to those in various fields of engineering, include home economics, mathematics, literature and philosophy, business and economics, physical and social sciences, design, and technical drawing.

This year's greatest innovation in the evening program is reflected in the technical drawing department which qualifies the Institute -- as the first and only college or university in the nation -- to award degrees in this particular field. Fourteen technical drawing courses will be offered this semester.

-more-

The Institute of Design (632 North Dearborn street), which last December became a degree-granting department of Illinois Tech, will offer 34 courses, including sculpture, life drawing, product design, package design, lettering, interior design, airbrush techniques, layout and photomontage, and painting and drawing.

The home economics department, formerly at 18 South Michigan avenue, is now located on the south side campus and will offer courses in food study, clothing, wool fibers and fabrics.

Evening students at Illinois Tech now have the opportunity to earn degrees in practically any field offered to daytime students, Dean Winston stated.

The 18-week term will begin Monday, September 18, and end, January 24.

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ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: September 8, 1950
FOR RELEASE: Immediate

Exclusive Photo Memo to Oscar Katov, Sun-Times

Registration at Illinois Institute of Technology is being conducted from September 11 to 15. Picture possibilities during this time are:

1) Over-all shot of some of the 8000 students who will be registering for evening and day courses at Illinois Tech.

2) Eleanor and Russell Forester, husband-wife team and former professional designers who are beginning freshmen at the Institute of Design of Illinois Tech.

3) Edward Mitchell (colored), first graduate of Dunbar Trade school ever awarded a scholarship to Illinois Tech.

4) Arnold H. Ivan, first student in the country to enroll for a degree in technical drawing. (Illinois Tech is now offering a four-year degree-granting course in this field and is the first and only college or university in the nation so qualified.)

If you are interested in any or in all of these photos, kindly call Monday morning, September 11, and I will arrange for picture set-ups at your convenience.

-- Margaret Williams

CAlumet 5-9600, ext. 545

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Mailed: September 8, 1950
FOR RELEASE: Immediate

CHICAGO -- An engineering course designed for college graduates seeking the status of "professional engineer" will be offered for the first time this fall at Illinois Institute of Technology.

The course provides a basic review of engineering subjects to aid those preparing for the professional engineers' examination. It includes a survey of mathematics, physics, chemistry, mechanics, and strength of materials and is open to anyone having a bachelor's degree in engineering or the equivalent.

Registration is scheduled from 6 to 8 p.m., Monday and Tuesday, September 11 and 12. The class will meet each Tuesday from 6:45 until 9:30 p.m., beginning September 19.

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September 8, 1950
Mailed:
FOR RELEASE: Immediate

CHICAGO -- Approximately 700 students are expected to enroll for the fall term at the Institute of Design of Illinois Institute of Technology, Fred R. Travis, director of admissions, has announced.

Of the total number, 350 are undergraduate and graduate day students and the remainder are evening students.

The Institute of Design, at 632 North Dearborn street, became a degree-granting department of Illinois Tech last December and, as such, is now qualified to award both undergraduate and graduate degrees in visual design, photography, and product design.

The 60 beginning freshmen will register from 9 a.m. until noon, Friday, September 15, at the Institute of Design, following a one-week orientation program on the Illinois Tech campus.

Undergraduate day students with advanced standings will register between 9 a.m. and 4 p.m., September 13 and 14. Registration for evening students, which began September 5, will continue through September 15, from 1 to 9 p.m., Monday through Friday.

All registration will be held at the Institute of Design and classes will begin there Monday, September 18.

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Mailed: September 8, 1950
FOR RELEASE: Immediate

CHICAGO -- Three staff changes in the applied mechanics department of Armour Research Foundation of Illinois Institute of Technology and the mechanics research and instruction department of Illinois Tech were announced today by Dr. Le Van Griffis, chairman of both departments.

Robert L. Janes, acting director of mechanics instruction at Illinois Tech, was named senior structural engineer at the Foundation.

Dr. William R. Osgood, senior research engineer at ARF, becomes director of mechanics instruction at the college.

Wilson P. Green, professor of mechanical engineering at Illinois Tech, becomes assistant chairman of the Foundation's applied mechanics department in charge of engine and lubricants research.

Janes, who has been with Illinois Tech since 1947, was supervisor of structural research at the Foundation from 1945 to 1947. He received his bachelor's degree from California Institute of Technology in 1936. From 1936 to 1941 he was a highway engineer for the state of California, and during the following two years was project engineer at the SantaFe dam at Azusa.

He is married and has four children, Donald, 11; Jerelyn, eight; Cynthia, six; and Robert, one. Janes and his family live at 9750 Indiana ave., Chicago.

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Dr. Osgood joined the Foundation last March, after four years with the Navy, where he did technical liaison work with contracting firms. From 1929 to 1946 he was a materials engineer for the National Bureau of Standards.

He was assistant professor of structural engineering at Cornell university from 1926 to 1929 and was an instructor in theoretical and applied mechanics at the University of Illinois from 1921 to 1926. Dr. Osgood earned bachelor's degrees from both Massachusetts Institute of Technology and Harvard, and received his M.S. and Ph.D. from the University of Illinois. He lives at 5236 South Cornell ave., Chicago.

Green received his bachelor's and master's degrees from the University of Florida. He was an engineer with the U.S. department of agriculture from 1936 to 1938, and from 1938 to 1946 was associate professor of mechanical engineering at the University of Maryland. He joined Illinois Tech in 1946. Green, who lives at 10323 South Seeley ave., Chicago, is married and has two children, Donald, ten; and Margaret, eight.

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September 8, 1950
Mailed:
FOR RELEASE: Immediate

CHICAGO -- Seventy chemists from England, Canada, and the United States will attend a three-day conference, September 11, 12, and 13, on "High Nitrogen Content Compounds" at Illinois Institute of Technology, it was announced today by Eugene Lieber, associate professor of chemistry at Illinois Tech.

Sponsored by the U.S. Naval Ordnance Test Station, the conference will include discussions of current developments and plans for future investigation in the field of nitroguanidine and related materials.

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Mailed: September 8, 1950
FOR RELEASE: Immediate

CHICAGO -- Speakers and program for a National Noise Abatement Symposium October 20 at Armour Research Foundation of Illinois Institute of Technology were announced today by Dr. Haldon A. Leedy, chairman of the program committee.

The symposium will be the first national meeting of its kind, Dr. Leedy said. Some 300 experts on noise and how to control it are expected to attend.

Joint sponsors of the symposium are the Foundation and the National Noise Abatement Council.

A Shock and Vibrations Symposium, dealing with more efficient movement of military supplies from factories to battle fronts by common carriers, will meet at the Foundation October 18 and 19. Arrangements for this meeting are being handled by the Office of Naval Research.

Dr. Leedy, who is director of Armour Research Foundation, listed the Noise Abatement Symposium program as follows:

9:00 A.M.	Registration
10:00 A.M.	"The Effect of Noise on Hearing, Morale, and Efficiency", Hallowell Davis, Director of Research, Central Institute for the Deaf, St. Louis, Mo.
10:40 A.M.	"Noise Abatement in Connection with Hearing", Douglas E. Wheeler, Field Representative of the Sub-Committee on Noise in Industry, of the Committee on Conservation of Hearing, of the American Academy of Ophthalmology and Otolaryngology, Los Angeles, California.

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11:20 A.M. "The Measurement of Noise".
Leo L. Beranek, Associate Professor of Communications Engineering and Technical Director of the Acoustics Laboratory, Massachusetts Institute of Technology, Cambridge, Mass.

12:15 P.M. Luncheon Meeting

2:00 P.M. "Control of Noise in Mechanical Equipment".
Howard C. Hardy, Supervisor of Acoustics and Vibrations Research, Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill.

2:40 P.M. "Control of Noise in Buildings by Air Conditioning".
C. M. Ashley, Chief Development Engineer, Carrier Corporation, Syracuse, N.Y.

3:20 P.M. "Control of Noise in Buildings".
Cyril M. Harris, Member of the Technical Staff, Bell Telephone Laboratories, Murray Hill, N.J.

4:00 P.M. "Control of Noise by Education and Legislation".
C. D. Yaffee, Chief, Field Section, Federal Security Agency, Public Health Service, Cinncinnati, Ohio.

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Mailed: September 11, 1950
FOR RELEASE: Immediate

CHICAGO -- Irving W. Wolf, 23, of 4510 Woodlawn avenue, has been appointed instructor in the department of chemical engineering at Illinois Institute of Technology.

The appointment, effective this fall, was announced today by Dr. Henry T. Rushton, director of the department.

Wolf earned his bachelor's degree in June of 1947 at Vanderbilt university, Nashville, Tennessee, where he graduated magna cum laude. In the following year he received his master's degree there and is currently working toward a doctorate at Illinois Tech.

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Mailed: September 12, 1950
FOR RELEASE: Immediate

CHICAGO -- The tentative program for the sixth annual National Conference on Industrial Hydraulics on October 18 and 19 at the Sherman hotel, Chicago, was announced today by Otto J. Maha, conference director and vice president of the Hannifin corporation, Chicago.

Sponsors of the non-profit, non-commercial technical conference are Armour Research Foundation of Illinois Institute of Technology and the graduate school of the Institute, with the cooperation of seven Chicago technical societies:

American Society of Civil Engineers, American Society of Mechanical Engineers, Society of Automotive Engineers, Western Society of Engineers, American Society of Lubricating Engineers, American Institute of Chemical Engineers, and the Institute of Aeronautical Sciences.

Maha listed the tentative program as follows:

Registration -- 8:30 a.m., Wednesday, October 18

Session I - Wednesday morning, October 18

General Session:	"Hydraulic Control Problems in Automatic Transmissions" by R. L. Smirl, Borg Warner Corp., Chicago "Operation and Care of Hydraulic Machinery" by J. C. Van Gundy, The Texas Co., New York City
Luncheon Program -	"INDUSTRIAL RESEARCH IN LATIN AMERICA" by Dr. H. A. Leedy, director, Armour Research Foundation of Illinois Institute of Technology

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Session II - Wednesday afternoon, October 18

Subject: AERONAUTICAL HYDRAULICS

"Aircraft Hydraulic Equipment Problems" by Carl W. Chambers, Douglas Aircraft Co., Santa Monica, Calif.

"Cavitation in Reciprocating and Rotary Pumps" by R. J. S. Pigott, Gulf Research and Development Co., Pittsburgh, Pa.

Subject: CENTRIFUGAL PUMPS

"Volute vs. Diffusor Casings for Centrifugal Pumps" by A. J. Stepanoff, Ingersoll-Rand Co., Phillipsburg, N.J.

Subject: CHEMICAL ENGINEERING

"Fluidynamics of Bubble Trays" by Glen S. Houghland and Warren C. Schreiner, The M. W. Kellogg Co., New York City

"Characteristics of Small Rotameters" by J. J. Moon, Phillips Petroleum Co., Bartlesville, Okla., and J. H. Rushton, Illinois Institute of Technology

Dinner - 7:30 p.m. - "THE FINDINGS OF THE HOOVER COMMISSION AND WHAT YOU CAN DO ABOUT THEM" by John P. Sanger, U.S. Gypsum Co., Chicago

THURSDAY, OCTOBER 19

Session III - Thursday morning, October 19

Subject: HYDRAULIC PRESSES

"Accumulator vs. Self-Contained Pumping Unit" by John J. Littley, Baldwin Locomotive Works, Eddystone, Pa.

"Large Hydraulic Presses in Germany before and during World War II" by A. Zeitlin, Hydropress, Inc., N.Y., N.Y.

Subject: CIVIL ENGINEERING

"Hydraulic Dredges" by J. E. Yager, Bucyrus-Erie Co., South Milwaukee, Wisc.

"Large Sewage Pumps" by H. T. Sward, Fairbanks, Morse and Co., Beloit, Wisc.

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Subject: HOSE AND FITTINGS

"Hose Assemblies and Related Fittings" by D. F. Stranberg, Anchor Coupling Co., Inc., Libertyville, Ill.

" 'O' and 'V' Ring Packings in the Industrial Hydraulic Field" by J. H. Swartz, Linear, Inc., Philadelphia, Pa.

Luncheon Program - "OBSERVATIONS IN KOREA" by Raymond D. Meade, Illinois Institute of Technology

Session IV - Thursday afternoon, October 19

Subject: AGRICULTURAL HYDRAULICS

"Utility of Hydraulic Power in Farming with Wheel-Type Tractors" by J. F. Ziskal, International Harvester Co., Chicago

"Utility of Hydraulic Power in Farming with Track-Laying Type Tractors" by F. P. Hanson, Caterpillar Tractor Co., Peoria, Ill.

Subject: REFINERY HYDRAULICS

"New Developments in Reciprocating Power Pumps" by E. F. Wright, Worthington Pump and Machinery Corp., Harrison, N.J.

"Application of Centrifugal Pumps" by A. E. Harnsberger, Pure Oil Co., Chicago

Subject: CONTROL OF SURGES

"The Desurger" by John H. Dawson, Oklahoma A. & M. college, Stillwater, Oklahoma

"Mechanical-Pneumatic Shokstops -- Their Place in Relief of Liquid Hammer" by Lewis H. Kessler, Northwestern Technological Institute, Evanston, Ill.

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Mailed: September 12, 1950
FOR RELEASE: Immediate

CHICAGO -- Edward Mitchell, 18, of 1219 South Damen avenue, has been awarded a scholarship to Illinois Institute of Technology, it was announced today by Fred R. Travis, director of admissions.

The scholarship was granted by the Chicago Youth Foundation and covers tuition and other fees throughout Mitchell's freshman year.

A June graduate of Dunbar Trade school, Mitchell spent the summer preparing for Illinois Tech's comprehensive entrance examinations. He is the first Dunbar high school graduate ever awarded a scholarship to Illinois Tech.

At Dunbar, Mitchell was on the varsity squads and won letters for both cross country and basketball. He will begin study at Illinois Tech September 18 when classes convene for the fall semester.

-mtm-

ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
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Public Relations Department
James W. Armsey, Director

Mailed: September 12, 1950
FOR RELEASE: Immediate

Memo to City Editor and Photo Editor

Registration for undergraduate students at Illinois Institute of Technology is being conducted Thursday and Friday, September 14 and 15. Picture possibilities during these two days are:

1) Over-all shot of some of the 8000 students who will be registering for evening and day courses at Illinois Tech.

2) Eleanor and Russell Forester, husband-wife team and former professional designers who are beginning freshmen at the Institute of Design of Illinois Tech.

3) Edward Mitchell (colored), first graduate of Dunbar Trade school ever awarded a scholarship to Illinois Tech.

4) Ivan A. Holm first student in the country to enroll for a degree in technical drawing. (Illinois Tech is now offering a four-year degree-granting course in this field and is the first and only college or university in the nation so qualified.)

Persons mentioned in this memo will be available at 10:30 a.m. Thursday, September 14, in room 392 of main building, 35 West 33rd street. I shall be happy to assist your photographer.

-- Margaret Williams
CAlumet 5-9600, Ext. 545

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Mailed: September 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Wayne Coy, chairman of the Federal Communications Commission, will address attendants at the sixth annual National Electronics Conference at a general luncheon session Monday, September 25, in the Edgewater Beach hotel.

More than 2,000 engineers and electronics specialists are expected to attend the three-day meeting. It will be held this year in conjunction with the "25 years of progress" celebration of the Chicago section of the Institute of Radio Engineers.

Long-time radio personalities in the Chicago area will gather with conferees for an "old timers" night Tuesday, September 26, with entertainment by the WLS barn dance troupe, one of Chicago's oldest radio shows.

Sixty papers on 20 electronics subjects will be presented at the technical sessions. Tuesday and Wednesday luncheons will be sponsored by the Chicago sections of IRE and the American Institute of Electrical Engineers.

O. D. Westerberg of Commonwealth Edison Company is chairman of the NEC board of directors. Nathan Cohn of Leeds & Northrup Company is president of the conference this year, and Dr. Howard C. Hardy of Armour Research Foundation of Illinois Institute of Technology is program chairman.

Sponsoring organizations are Illinois Institute of Technology, Northwestern University, University of Illinois, AIEE, IRE, University of Wisconsin, and the Society of Motion Picture Engineers.

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Mailed: September 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Allen Devinatz, 28, of 1534 South Tripp avenue, has been appointed instructor in mathematics at Illinois Institute of Technology.

The appointment, effective this fall, was announced today by Lester R. Ford, chairman of the department.

A graduate of Crane Technical high school, Devinatz received his bachelor's degree at Illinois Tech in February of 1944 and his master's and doctor's degrees in 1947 and 1950 at Harvard university.

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Mailed: September 18, 1950
FOR RELEASE: Immediate

CHICAGO -- A grant of $5,000 to Illinois Institute of Technology from the Wunsch Foundation, Brooklyn, New York, was announced today by Dr. Henry T. Heald, president of the Institute.

The grant will be used to establish a Silent Hoist and Crane Company Materials Handling award of cash prizes to be given annually to the Illinois Tech students writing the best papers on the subject of "Materials Handling."

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Mailed: September 18, 1950
FOR RELEASE: Immediate

CHICAGO -- Frank W. Edwards, director of the department of civil engineering at Illinois Institute of Technology, has been appointed to assist Major Lenox R. Lohr in planning the Engineering Centennial Celebration for 1952.

The Centennial is being sponsored by the American Society of Civil Engineers, founded in 1852, and will be held in Chicago.

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Mailed: September 18, 1950
FOR RELEASE: Immediate

CHICAGO -- John R. Ward, 25, junior student at Illinois Institute of Technology, has been awarded a prize of $100 in a nation-wide engineering college contest for a paper entitled "Proposed New Design for a Welded Hot Water Heater."

The contest, sponsored by the James F. Lincoln Arc Welding Foundation, Cleveland, drew entries from 40 engineering colleges throughout the country.

A January 1943 graduate of Crane Technical high school, Ward is majoring in mechanical engineering at Illinois Tech. He lives at 7835 South Kildare avenue.

-mtm-

from
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Technology Center
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Mailed: September 19, 1950
FOR RELEASE: Immediate

CHICAGO -- More than 2,000 engineers and electronics specialists are expected to attend the sixth annual National Electronics Conference September 25, 26, and 27 at the Edgewater Beach hotel.

Sixty papers on the latest developments on 13 electronics subjects will be presented. Interesting and topical reprots will be presented in such fields as television, exploration and navigation, electroacoustics, nucleonics, magnetic amplifiers, computers, and instrumentation.

J. A. Good, Diamond Power Specialty Co., Lancaster, Ohio, will discuss results of an extensive survey on industrial applications of television.

A paper by H. R. Johnston, C. A. Hermanson, and H. L. Hull, of the Argonne National Laboratories, will discribe the possibilities of three dimensional television in conjunction with remotely controlled electric manipulators.

The development and use of equipment for detecting unwanted metal in wood and ore will be described by C. W. Clapp, General Electric Company, Schnectady.

Principle of a new method of geographical radio surveying already used in the Gulf of Mexico will be given by J. E. Hawkins, Seismograph Service Corporation, Tulsa.

A paper by David L. Markusen, Minneapolis-Honeywell Regulator Company, Minneapolis, will deal with the stability problems of automatic control of an aircraft.

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The advantages of electronic control for heating systems over the conventional mechanical control systems in the form of steadier room temperatures, lower heat losses, and greater sensitivity to changing conditions will be outlined in a paper by J. M. Wilson, Minneapolis-Honeywell Regulator Company, Minneapolis.

A revolutionary method for determining the water content of snow cover in mountainous areas by use of radio-active material will be the subject of a paper by J. A. Doremus, Motorola, Incorporated, Chicago.

The conference is sponsored by Illinois Institute of Technology, Northwestern University, University of Illinois, University of Wisconsin, American Institute of Electrical Engineers, Institute of Radio Engineers, and Society of Motion Picture and Television Engineers.

-jeg-

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Mailed: September 21, 1950
FOR RELEASE: Immediate

CHICAGO -- The Illinois Tech Relays, the nation's largest indoor collegiate track meet, will be discontinued, it was announced today by Bernard "Sonny" Weissman, athletic director.

In announcing the college's decision to abandon the meet, Weissman explained that it had become "administratively impossible to properly conduct the meet."

Chief factor in the decision was the lack of accord among the coaches on elegibility regulations regarding the participation of freshman, graduate, and transfer students, and the tendency of some coaches to keep "name" performers for other meets.

Other reasons were: schedule difficulties, Illinois Tech's inability to reimburse participating schools for travel expenses, curtailed participation because of athletic budget cuts in smaller colleges, discord over definition of the "university" and "college" classifications, and lack of cooperation by some universities because of the prominence given to the college division.

The 19th annual meet last spring drew 700 athletes from 11 universities, 29 colleges, 5 junior colleges, and 8 high schools. In the university division, Illinois nosed out Michigan in the final event. Michigan Normal took the title in the college division for the fourth straight year and the seventh time in the past eight years.

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The Relays were under the direction of John J. Schommer, nationally-known sports figure and Illinois Tech athletic director, from their inception in 1929 until his retirement in 1949. The meet grew out of a triangular meet in 1928 between Armour Tech (now Illinois Tech), Northwestern university, and the University of Chicago.

Three existing American indoor records have been set in the Tech Relays and a fourth tied. In 1947 Herb McKenley of Illinois ran the 440-yard dash in :47.9. The same year Dick Houden of Wisconsin sprinted the 70-yard dash in :07.0 to tie the mark of Ralph Metcalf and Loren Murchison. This last mark was also equalled in 1949 by Garion Campbell of Michigan Normal.

In 1948 Harrison Dillard of Baldwin-Wallace and Bill Porter of Northwestern ran the 70-yard low hurdles in :07.7, and Dillard set the 70-yard high hurdle mark of :08.4 the same year.

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Mailed: September 21, 1950
FOR RELEASE: Press Memo

Memo to City Editors, Photo Editors, and Radio Editors:

The sixth annual National Electronics Conference will be held Monday, Tuesday, and Wednesday (September 25, 26, and 27) at the Edgewater Beach Hotel.

Best news and picture bets are the address by Wayne Coy, chairman of the Federal Communications Commission, at the Monday noon luncheon; the old timers night with the WLS barn dance troupe Tuesday night; the electronic umpire demonstration at Wrigley Field Wednesday morning; and the exhibits at the conference.

A special memo on the electronic umpire is being sent to the Sports Desks by Jack Gavin, athletic publicity director at Illinois Tech.

Several summaries of technical papers are inclosed with this memo. Others will be available in the press room Monday. Tickets will be available in the press room for the Monday noon luncheon at which Coy will talk. No advance copies of his talk are now available, but he says he'll have them with him Monday morning when he arrives.

Call Jack Gavin at the press room Monday morning for further information and assistance.

-- Jim Armsey

FOR RELEASE AFTER 2 P.M., MONDAY, SEPTEMBER 25, 1950

ELECTROLYTIC TANK STUDIES IN DESIGNING HIGH VACUUM TUBES

BY JOHN E. JACOBS
ENGINEERING LABORATORY
GENERAL ELECTRIC X-RAY CORPORATION

Multi-section X-ray therapy tubes operating at 300 kilovolts have been successfully designed from information obtained by the use of plastic models in a tank of water.

In using this method the parts of the tubes are constructed to a scale of three times actual size and then placed in a tank of pure water. Potentials of the order of thirty volts are applied to these scale models and the electric field set up in the water is then measured. The information obtained in this manner is then evaluated using graphical methods and from this evaluation comes the proper design of the tube.

This method permits determination of the current distribution in the tube before the tube is actually constructed and thus eliminates the costly process of building a large number of experimental tubes.

Various new designs were evaluated from the plastic models and tubes constructed to verify the model's accuracy. A new style tube was developed by this method that gave higher electronic efficiency than previously manufactured models.

END ADVANCE FOR RELEASE AFTER 2 P.M., MONDAY, SEPTEMBER 25, 1950

FOR RELEASE AFTER 2 P.M., TUESDAY, SEPTEMBER 26, 1950

"The Study of Oscillator Circuits by Analog Computer Methods"

By Han Chang, R. C. Lathrop, and J. C. Rideout
University of Wisconsin

The high-speed electronic analog computer, more familiarly known as the "electric brain", has now been made to give answers to a wide variety of oscillator problems in all kinds of electrical and mechanical equipment, three University of Wisconsin electrical engineers reported to the National Electronics Conference meeting in Chicago Tuesday, (September 26).

The study of oscillator circuits, an important group of electric circuit problems, has always been more or less of a bugaboo to engineers, and their solution in the past has often required days of mathematical figuring on paper, or hours of mechanical calculations. Even then some of the problems were so mathematically complex they could not be solved, and any solution usually required a good deal of approximation.

But now the Wisconsin electrical engineers, R. C. Lathrop and Han Chang, research assistants, and Prof. V. C. Rideout, have succeeded in developing a reasonably general technique, through the use of the high-speed electronic analog computer, which can be applied to all kinds of oscillator on electrical circuit problems, be those problems in simple home radios, in complex television studios, or in a huge indistrial plant.

Lathrop presented the paper written by the three men, entitled, "The Study of Oscillator Circuits by Analog Computer Methods," at the conference, and described how he and his colleagues used Wisconsin's "electric brain" to simulate the non-linear differential equations which define the operation of oscillators.

Lathrop noted that Russian scientists had made outstanding early contributions in the mathematical study of these equations, and that Princeton scientists had recently translated and added greatly to this work. However, all ordinary mathematical proceses developed to date require much tedious calculation to give numerical results, he pointed out. The high-speed electronic computer solves many oscillator problems and gives numerical answers in a fraction of the time required by older methods, he said. It will solve some problems which were not attempted heretofore because of their extreme mathematical complexity.

In the Philbrick type of computer used at the University of Wisconsin small compact units containing special vacuum tube circuits are connected together by cables in such a way that the computer obeys the same equation as the oscillator being studied. The result appears as a graph plotted instantaneously on a cathode-ray oscilloscope, which resembles a television receiver. The operator can vary the dial controls on the units to change the equation, and the result appears instantaneously on the cathode-ray oscilloscope.

END ADVANCE FOR RELEASE AFTER 2 P.M., TUESDAY, SEPTEMBER 26, 1950

FOR RELEASE AFTER 10 A.M., TUESDAY, SEPTEMBER 26, 1950

THE GENLOCK--A NEW TOOL FOR BETTER PROGRAMMING IN TV

JOHN H. ROE
Television Terminal Engineering
RCA Victor Division, Radio Corporation of America
Camden, N. J.

The rapid development of television broadcasting is bringing about a corresponding demand for improvement of program techniques. Smoothness of switching from one part of a program to another is necessary to maintain continuity of interest and thus avoid destracting the viewer's attention from the subject matter of the program.

The technique of switching from one camera to another in the same studio, or from one studio to another in the same station, offers no serious difficulty in maintaining smoothness. The reason for this is simply that, in such cases, all the cameras involved are operating from the same synchronizing generator, and, because the switching operations are done in such a way as not to interrupt the synchronizing information sent out to the receivers, the receivers do not fall out of step even momentarily.

However, each television station has its own independent synochronizing generator. While these generators all operate in the same general manner, and put out signals according to accepted standards, they do not remain in exact synchronism with each other at every instant. In more technical terms, the relative phase relationship between two sync generators in constantly drifting back and forth even though the average frequencies are exactly the same. When a program is switched from one such independent source to another, there is necessarily a momentary break in the synchronizing information sent to the receiver, and afterwards the receiver must accommodate itself to the new sync information. This usually causes a "roll-over" of the picture.

To avoid such breaks in continuity, it is necessary to tie the sync generators together so that they act as one. RCA has developed a device called a Genlock which accomplishes this result automatically. Thus a station may tie its sync generator to the signal received over a network line, or to any other signal from a remote source, and be able to switch back and forth between the two signals with the same smoothness as though all signals originate locally.

END ADVANCE FOR RELEASE AFTER 10 A.M., TUESDAY, SEPTEMBER 26, 1950

FOR RELEASE AFTER 2 P.M., TUESDAY, SEPTEMBER 27, 1950

"Germanium Photocells" by George D. O'Neill
Sylvania Electric Products Inc., Bayside, N. Y.

Among the scientific phenomena investigated during World War II which are now coming into important applications in industry and in further scientific use is the effect of infrared light on germanium.

Germanium is one of the ninety-odd chemical elements. While it is a very close kin of silicon, one of the most common of all elements, germanium is a rare substance; its cost is several hundred dollars a pound in the refined state.

A tiny piece of germanium, when properly prepared and placed in contact with a pointed wire such as in the old-fashioned "cat whisker detector" used in radio thirty to forty years ago, may be used as a light-actuated valve to control the flow of an electric current. Such a device is called a germanium photocell. Those described by Mr. O'Neill are smaller in diameter than a match stick and less than half an inch long. They are molded in clear plastic and require only a single pair of connecting wires.

According to the speaker, germanium photocells are of three types which he calls the photoresistance cell, the photoconductance cell, and the photovoltaic cell.

The photoresistance cell is able to produce electric signals at least as great as twenty-five volts when a light shining on the cell is interrupted or modulated. With such a system the "reading" of punched tape, as in a automatic telegraph system, becomes highly simplified. Card sorters, computers and other modern tools of business and industry can be made to operate at very high speeds and will be cheaper to build.

The photoconductance cell has a large current response, so large that it can be used to operate a relay directly in applications such as alarms, door openers, etc.

Photovoltaic cells are similar to a tiny battery but have the peculiar property of supplying a voltage in proportion to the amount of light shining on the germanium.

The speaker explained the present theory of their action. The electrical resistivity of pure germanium is very high in the dark, but that light decreases the resistivity by unlocking electrons within the chemical bonds of the material so that these electrons are available to conduct an electric current. The electrons, however, do not account fully for the current conduction. It was explained that, under some conditions, current may be conducted by "holes". These are, in essence, positive charges which occur when electrons move away from a chemical bo Unlike positive ions, which are formed by removal of an electron from an atom, a "hole" is free to move within the body of the germanium. Hole conduction, while familiar to physicists for many years, is an effect not commonly encountered in ordinary electrical devices.

Mr. O'Neill is the head of the Solid State Section of Sylvania Electric Products Inc., Bayside, N. Y.

END ADVANCE FOR RELEASE AFTER 2 P.M., TUESDAY, SEPTEMBER 27, 1950

FOR RELEASE AFTER 2 P.M., WEDNESDAY, SEPTEMBER 27, 1950

Radio-Active Snow Gage & Radio Telemetering System

By John A. Doremus, Motorola, Inc.

In the past, the water content of snow cover in mountainous areas has been measured by a laborious process. Scientists on skiis would take samples of the snow at selected locations with long cylindrical tubes and weigh it to determine the average density. Marker poles showed the depth. The water content was determined as a multiplication of the density by the depth. Many readings had to be taken to determine average snow cover. This process was much too slow to get any data on the rate of fall or rate of melting of the snow.

A completely revolutionary system has been devised by Dr. R. W. Gerdel of the U.S. Weather Bureau and tested last year. Production quantities of the equipment are now being produced for a large system installation.

In this revolutionary system, a small sample of radio-active material is buried close to the surface of the ground at the place where measurement is desired. A Geiger-Mueller tube is suspended over the spot and detects the radiation from the sample. As snow falls, it fills the space between the sample and the G-M tube and thereby attenuates the radiation. The attenuation is a function of the water-content of the snow cover and therefore gives the desired data at one reading.

Impulses from the G-M tube are conducted to a telecoder which turns these pulses into signals which can readily be transmitted via radio. A frequency-modulated transmitter operates for a certain period each day sending the coded signals toward the recording station.

Many such stations can be installed and operated in a single co-ordinated system. Repeater stations each collect the signals from several data-transmitting stations and transmit the signals directly to the recording station. Several hundred readings can be taken in a day.

At the recording station the signals are decoded and turned into impulses that can be counted on a scaler-divider. Counts are recorded on each station every day.

This system will provide an accurate check on the available water from snow in the California mountains where in the summer, the diligent use of this water makes every gallon worth its weight in oranges.

END ADVANCE FOR RELEASE AFTER 2 P.M., WEDNESDAY, SEPTEMBER 27, 1950

FOR RELEASE AFTER 2 P.M., WEDNESDAY, SEPTEMBER 27, 1950

ELECTRONICS IN ELECTRIC POWER CENTRAL STATIONS

By A. J. Ward
Sargent & Lundy, Engrs.

The utilization of electronics in steam-electric power stations is covered citing numerous devices and their basic principles of operation. The various sections of the power plant are treated separately with particular accent on those problems more common to the electric power generating industry.

Boiler plant instrumentation and control are emphasized and consideration is given to such other functions as turbine generator electronic excitation, machine vibration and expansion instrumentation, and transmission line relaying and communication by high line carrier and microwave radio.

In the discussion on instrumentation, principle sources of measurement and control intelligence are reviewed along with the measuring circuits they supply. Boiler water conductivity and acidity, generator hydrogen cooling gas purity, high temperature and pressure steam measurements, and smoke control are each covered and mention is made gas leakage detection in mercury cycle boilers.

Of the numerous control problems existing, attention is given to boiler draft fan and feedwater pump speed control, particularly through magnetic air gap coupling devices electronically regulated. Remote positioning and boiler loading applications are cited as are boiler flame failure detection devices based on electronic principles. The advantages of boiler water level televised indication are also given.

Electronic relay problems are briefly enumerated and new performance features are indicated. Telemetering schemes for system centralized load dispatching and control are briefly described citing their indispensable functions in power systems. The widespread use of equipment involving electronic components is exampled throughout the power plant. New fields of application will appear as the day of neuclear steam generators approaches.

END ADVANCE FOR RELEASE AFTER 2 P.M., WEDNESDAY, SEPTEMBER 27, 1950

FOR RELEASE AFTER 10 A.M., WEDNESDAY, SEPTEMBER 25, 1950

"A PORTABLE PROJECTION OSCILLOSCOPE"

By Victor Wouk, Beta Electric Corporation

Called by some engineers an "electronic blackboard", the Beta Electric Corp. portable projection oscilloscope, described by Dr. Victor Wouk in the paper "A Portable Projection Oscilloscope", is designed primarily for schools and lecture hall.

The cathode ray oscilloscope, which shows in electrical terms such things as sound waves, radio waves, etc., is an ideal educational tool as well as scientific instrument. Heretofore, the usefulness of the instrument for educational purposes has been limited by the fact that the picture size has been no more than three or five inches. This can scarcely be viewed by more than a few people in the first few rows of a class room or auditorium.

Projection oscilloscopes have been made available for throwing very large images of oscilloscopic traces on a screen in a large auditorium. However, this equipment has been rather bulky and expensive. The Portable Projection Oscilloscope of the Beta Electric Corp. folds up into a carrying cabinet no larger than a good sized suitcase. It unfolds into a long box holding a screen onto which the oscilloscope image is projected.

In addition to the large picture available, the instrument has the advantage of giving a very bright image, so that the lights need not be turned out, when being viewed in a large auditorium.

Besides the educational applications, the instrument can also be used in industrial and military applications where it is desired to view an oscilloscope trace continuously, and the advantage of a large picture to relieve eye strain is apparent.

END ADVANCE FOR RELEASE AFTER 10 A.M., WEDNESDAY, SEPTEMBER 25, 1950

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Mailed: September 21, 1950
FOR RELEASE: Press Memo

Memo to Sports Editors and Sports Photo Editors:

As part of the sixth annual National Electronics Conference, the General Electric Corporation is planning a demonstration of its "electronic umpire" with the cooperation of the Chicago Cubs at 11 a.m. Wednesday, September 27 at Wrigley Field.

This electronic device for calling balls and strikes also records the speed at which the ball is thrown.

While studies have been made on the swiftness of a pitch, the slowness with which a ball can be thrown has never been measured. This may present an interesting item on the varying speeds to which a batter must adjust.

Another possibility concerns the speed of various Cub pitchers, as well as their reactions to the device. The inclosed abstract describes the unit and its operation.

Richard F. Shea of the GE electronics laboratory is in charge of the demonstation.

-- Jack Gavin

FOR RELEASE AFTER 2 P.M., MONDAY, SEPTEMBER 25, 1950

THE ELECTRONIC UMPIRE

By Richard Shea, General Electric Company

The General Electric Electronic Umpire is a device which automatically indicates the passage of a baseball through the prescirbed "strike" zone, and, at the same time, indicates the speed of the pitch. The equipment consists of two sections, a ground unit containing the phototubes and preamplifiers, and a control unit containing the auxiliary circuits for indicating the "strike" and for measuring speed. No auxiliary lights or other equipment are necessary and setting up the equipment is a matter of minutes. The ground unit is only 1½ inches in height and carries a simulation of the home plate. The control unit may be located at any point within a radius of 25 feet of the ground unit.

The ground unit contains three sets of phototubes and associated lenses and aperatures whereby each set of phototbues looks at the sky through a very narrow slit in the top of the ground unit. Two of these sets of phototubes look directly up, the third set along an inclined path. In effect, then, the ground unit is directing three beams upward, two vertical, one slant. The angle of inclination of the slant beam is adjusted to intersect the first vertical beam at the proper knee height, the second vertical at arm-pit height.

When a baseball passes through these beams it causes a shadow to fall on the phototubes. This produces a pulse which is amplified and passed on to the control unit, where it triggers a series of thyratron tubes. These tubes must be triggered in a specific sequence, corresponding to interruption of the slant beam after interruption of the first vertical beam and before the second vertical beam. Any other sequence will not trigger the device. A low or high pitch will produce an improper sequence, and a wide pitch will miss one or more of the beams,

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with the result that the device will not call a "strike".

The interval between the interruption of the two vertical beams is measured to provide an indication of the speed of the pitch.

Additional circuits are incorporated for resetting the equipment after each pitch, whether a "ball" or "strike". In addition arrangements have been made for connection to a tape recorder, which will call out the word "STRIKE" each time the device is actuated.

END ADVANCE FOR RELEASE AFTER 2 P.M., MONDAY, SEPTEMBER 25, 1950

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Mailed: September 21, 1950
FOR RELEASE: Immediate

CHICAGO -- Do scientists know enough about noise and its effects on people to set standards on civilization's clamor? Or should there be more research?

That will be the subject of a talk by Dr. James H. Sterner, chairman of an American Medical Association committee on health hazards, at a luncheon meeting during the National Noise Abatement Symposium October 20 at Armour Research Foundation of Illinois Institute of Technology.

Dr. Sterner, who is associate medical director for the Eastman Kodak Company, Rochester, N.Y., will discuss "Are We Ready for Standards in Noise?"

Seven additional talks on the control, effects, and measurement of noise are scheduled for the national meeting at which some 300 experts are expected. Joint sponsors of the symposium are the Research Foundation and the National Noise Abatement Council.

The meeting will follow a Shock and Vibration Symposium October 18 and 19, also on the Illinois Tech campus, conducted by the Office of Naval Research for the Research and Development Board.

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Mailed: September 22, 1950

FOR RELEASE: Immediate

CHICAGO -- Because of the increased scope of its campus development and slum clearance program, Illinois Institute of Technology has established a Tenant's Relocation Office.

The office will be headed by Mrs. Bernice H. Reynolds, 39, of 835 East 65th street, former member of the Mayor's housing and development committee, it was announced today by Raymond J. Spaeth, executive secretary and treasurer of Illinois Tech.

Mrs. Reynolds is a graduate of Howard University, and has been employed as an examiner in the U. S. Army accounting office, and as an investigator in the OPA and the Veteran's Administration.

She was on the staff of the housing and development coordinator from 1948 until her resignation to accept the Illinois Tech post. She has been in charge of relocating families on the Veterans' Hospital site, at Riverdale Trailers, and on the Congress Street Superhighway.

Since its formation in 1940 through the merger of Armour and Lewis Institutes, Illinois Tech has undertaken a long-range development program which has extended the Institute's holdings from 7 acres to 85 of a proposed 110. To date 67 acres have been cleared, improved, or rebuilt.

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From:
ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: September 22, 1950
FOR RELEASE: Immediate

Exclusive to Miss Betty Walker, "No Man's Land" of Sun-Times

CHICAGO -- A few of the new students grinned as Miss Lois Graham, instructor at Illinois Institute of Technology, began to lecture on the subject of heat transfer.

After the hour's lecture, the 25-year-old brown-eyed engineer had convinced her class of 45 mechanical engineering students that the male had no monopoly on this subject.

Having received her master's degree at Illinois Tech in February of 1949, Miss Graham is now beginning her second year of teaching.

And she is quick to explain, as her students have also observed, that her knowledge is not confined to textbook theory. She'll not falter in fixing an ailing piece of laboratory equipment for the sake of manicured nails or nylon hosiery.

How did Miss Graham get started in this strange business? Well, she says, my father was a professor of physical education at Rensselaer Polytechnic Institute in Troy, N.Y., and I had a chance to go there tuition free. She was one of the first four women engineers accepted by the college and of the three others who entered with her, only one other, a metallurgical engineer, completed the course.

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"I wanted to become a mechanical engineer as far back as my freshman year in high school," Miss Graham explained, "and so I just went ahead and studied for it."

During her first semester at Rensselaer, she stated, "fellow classmates regarded me with some skepticism but soon learned I was as serious about my career as they were about their~~'~~s."

Her exceptional grades show she was even more serious than many who doubted her. She was elected to Tau Beta Pi, highest national engineering honorary society; Pi Tau Sigma, national honorary mechanical engineering society; and Sigma Xi, national honorary research organization.

By attending summer school, she graduated in less than three full years and in April, 1945, began work as a mechanical engineer in the development division of the Carrier corporation, Syracuse, New York.

Although, she worked at Carrier for only one year, most of the vice presidents knew her because they had made it a point to look up "that woman engineer."

Then in the fall of 1946, Miss Graham accepted a graduate assistantship at Illinois Tech. And today, a veteran teacher with two years experience, she still considers herself more of a student than an instructor since she is currently working toward a doctorate in mechanical engineering at Illinois Tech.

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from...
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3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: September 22, 1950
FOR RELEASE: By Phone

CHICAGO -- Tentative dates for the 4th annual Illinois Tech Prep Basketball Tourney were announced today by Bernard "Sonny" Weissman, Tech athletic director.

The tournament for Chicago Public high schools will run from Tuesday, December 26 through Saturday. December 30. If entries are as large or larger than the 35-team field last year, first round games will be played the preceding Friday and Saturday (December 22 and 23).

All games will be played at the stockyards International Amphitheatre, 42nd and Halsted streets.

Marshall high school, whose teams have yet to lose a game while winning all three of the previous Tech Tournaments, will be back to defend their title. Other perennial contenders, Calumet, Senn, and Vocational are expected to challenge Marshall's supremacy again this year.

Illinois Tech sponsored its first tournament in 1947 after the University of Chicago discontinued the Holiday meet it had conducted since 1935.

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Mailed: September 25, 1950
FOR RELEASE: Immediate

CHICAGO -- Albert Litvin, materials engineer for the National Bureau of Standards, has been named structural engineer at Armour Research Foundation of Illinois Institute of Technology.

Litvin's appointment was announced today by Dr. E. P. Flint, chairman of the Foundation's ceramics and minerals department.

In his new position, Litvin will be doing research in the field of lightweight aggregates and concrete.

While with the National Bureau of Standars, Litvin supervised the cement testing laboratories at Washington and was responsible for the testing of cement for many large government projects. He joined the Bureau in 1941 after working for the International Boundry Commission in Texas and the Department of Subways and Superhighways in Chicago.

Litvin, 34, is a graduate of the University of Illinois where he majored in civil engineering. He lives at 7634 Kingston ave., Chicago.

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Mailed: September 26, 1950
FOR RELEASE: Immediate

CHICAGO -- Prominent scientists of the country will speak in the 8-lecture series of Illinois Institute of Technology's mechanics colloquium during the 1950-51 academic year, it was announced today by Stephen Fraenkel, colloquium secretary.

First of the monthly meetings is scheduled for October 4. Mr. L. Landweber, chief of the hydrodynamics division, David Taylor Model Basin, Washington, D. C., will talk on "Current Research on Frictional Resistance of Fluids."

All meetings except the sixth will be held on the Illinois Tech campus at 33rd and Federal streets. The March 7, 1951, meeting will be conducted at the Technological Institute, Northwestern University, Evanston, Illinois.

The meetings are free and open to the public. Lectures are scheduled at 8 p.m. and are preceded by a dinner at 6:30.

The complete program:

October 4, 1950	"Current Research on Frictional Resistance of Fluids" by L. Landweber, chief hydrodynamics division, David Taylor Model Basin, Washington, D.C.
November 1, 1950	"The Mechanics of Rubber" by Dr. R. S. Rivlin, the Royal Institution, London, England.

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December 6, 1950	"Current Theories of Fatigue of Materials" by Dr. A. M. Freudenthal, professor of civil engineering, Columbia University, New York. (Joint Meeting with the Western Society of Engineers).
January 10, 1951	"The Buckling Problem from the Standpoint of Dynamics" by Dr. N. J. Hoff, professor of aeronautical engineering and head of the department, Polytechnic Institute of Brooklyn, New York. (Joint meeting with the American Society of Civil Engineers.)
February 7, 1951	"On the Most Effective Way for Producing High Tensile Stresses" by Dr. M. Hetenyi, walter p. murphy professor, the Technological Institute, Northwestern University, Evanston, Illinois.
March 7, 1951	"Inverse Solutions of Problems of Applied Mechanics", by Dr. H. J. Reissner, professor of aeronautical engineering, Polytechnic Institute of Brooklyn, New York. (This lecture will be held in the Technological Institute, Northwestern University, Evanston, Illinois.)
April 4, 1951	"Vibration Analysis Applied to Engineering Design" by Dr. N. O. Myklestad, professor of applied mechanics, College of Engineering, University of Illinois, Urbana, Illinois. (Joint meeting with the American Society of Mechanical Engineers.)
May 2, 1951	"Recent Developemtns in the Field of Ultrasonics" by Dr. R. C. Binder, professor of mechanical engineering, Purdue University, Lafayette, Indiana.

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September 26, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- William E. Goode, former visiting lecturer in organic chemistry at the University of Illinois, has been named instructor in chemistry at Illinois Institute of Technology, it was announced today by Dr. Martin Kilpatrick, department chairman.

A native of Denton, Texas, Goode attended North Texas State College there after graduation from Denton Senior High school. He received his bachelor of science degree in 1946, and his master's degree in 1947 at North Texas State.

He was awarded his doctor's degree last June at the University of Illinois. Goode is a member of the American Chemical Society and has had two papers published in the society's Journal.

He is 27, married, a veteran, and lives at 3140 South Michigan avenue in Chicago.

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Mailed: September 26, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 10 A.M. (EST) FRIDAY, SEPTEMBER 29, 1950

ABSECON, N.J. -- America's industrial research laboratories will be forced to match Russia's larger population with superior processes and products in the event of World War III, a research executive declared here today.

"Production is the only thing that can overcome the weight of numbers. The research that is done by each company, or by entire industries through trade associations, makes a real contribution to national security," Lawrence O. Paul, assistant director of Armour Research Foundation of Illinois Institute of Technology, told the national meeting of the Compressed Air and Gas Institute.

Discussing "Cooperative Research--What It Can Accomplish for Trade Associations," Paul observed that industry's willingness to gamble on research is one key to depression-proofing America.

The speaker cited seven advantages of research programs undertaken by trade associations representing entire industries:

1. Industry-wide problems, too large for an individual manufacturer to handle, can be solved.

2. Small manufacturers without their own research facilities can benefit.

3. The expense is spread over a number of companies.

4. Overlapping research activities are often eliminated.

5. All members of the industry benefit from expanded markets and general improvement of the industry's competitive position.

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6. Research activities of related industries and government agencies are more readily exploited.

7. The combined knowledge and experience of all companies can help eliminate false starts and blind alleys.

"Trade associations of all types are becoming increasingly interested in industrial research of a scientific and engineering nature," Paul said, "and many thereby have made an outstanding contribution to the welfare of their membership."

He described research programs supported by the Pennsylvania Grade Crude Oil Association, the Structural Clay Products Institute, and the Association of Roller and Silent Chain Manufacturers--all conducted in part at Armour Research Foundation--as examples of this trend.

Paul named improper planning and lack of participation as major obstacles to successful trade association research programs. He emphasized that all problems selected be industry-wide with plainly stated objectives, that each company unselfishly contribute its individual knowledge, and that a central authority in the person of a Research Director be entirely responsible for execution of the program.

"Good research takes time and costs money, but it is the only kind that will bring results," Paul concluded. "As in war, too little too late can bring failure."

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END ADVANCE FOR RELEASE AFTER 10 A.M. (EST) FRIDAY, SEPTEMBER 29, 1950

ADVANCE FOR RELEASE AFTER 10 A.M. (EST) FRIDAY, SEPTEMBER 29, 1950

Note to Editors:

Following is the text of an address to be delivered Friday, September 29, 1950, by Lawrence O. Paul, assistant director of Armour Research Foundation of Illinois Institute of Technology, at the national meeting of the Compressed Air and Gas Institute in Absecon, N. J.

--Jim Armsey

"Cooperative Research--What It Can Accomplish for Trade Associations."

The benefits of industrial research accrue not only to the industry or trade association performing the work, but have a very real influence on the nation at large. Therefore, before discussing specifically research by trade associations, I will review some of the reasons why industrial research is important to all of us.

At least since the Industrial Revolution, the strength of nations has been determined largely by their commercial strength or capacity to produce. Our British cousins are an obvious example. During the 19th century, no statesman would involve his country in any endeavor without the active support, or at least the approval, of Britain. Mohammed' Ali and his great son Ibrahim, rulers of Egypt and Arabia and most of Palestine, attempted the invasion of Albania without the approval of Britain, the International Police Force of that era. As a result, the British Mediterranean Fleet, without a declaration of war, proceeded to enter the harbor and sink without further formality the invasion fleet.

Similarly, the great Russian Bear had its ambitions of graudeur somewhat clipped as a result of the activity of Britain and her allies at the Crimea.

Our own Civil War was fought along the Potomac and the muddy banks of the Mississippi, but the war was won and lost along the crowded shores of the Thames River in England. It was the unwillingness of the British Government, for all the pressure created by British commercial interests, to break the union blockade of the south that prevented King Cotton from producing the victory so fondly expected by Jefferson Davis and his government.

Yes, the Britain of the 19th century was a power to conjure with in international affairs. She achieved this position by being a living exponent of the mechanization we have called the Industrial Revolution. Beginning in the last quarter of the 19th century, and continuing with an accelerated pace, England has lost her leadership in production and her fall from power and influence has resulted.

The English of today are just as intelligent and just as competent from a scientific standpoint as any other nation. They seem, however, to have lost the incentive to keep progress with the developments of improved industrial products and processes and have seen various nations, as a result, pass her productive capacity--particularly the United States and Russia. In this connection, a member of the Scientific Review Board of England recently visited the Foundation and reported that in his country there is almost no market for industrial research among British industrialists. He expressed the opinion that this was a cause for major concern in regard to Britain's future.

The change from a dominant position to merely one of participating in international affairs came to England quite rapidly as time is measured by history. It can also, gentlemen, come to other nations who do not keep pace and who do not actually accelerate under present day conditions the rate at which improvements are incorporated into their national plans.

We believe that we are now the dominant industrial nation of the world. We are probably correct in this assumption but we must be sure that it does not

become an assumption contrary to the facts. Our competition is very real and very strong. In Russia we have a nation at least as well equipped from the standpoint of natural resources as our own, and a nation that has a larger population.

In the event of war with Russia, we will be fighting a nation with a larger population for the first time since the war of 1812. It certainly can be said that Russia is someone our own size. Production, both as to quality and quantity, is the only thing that can overcome, over the long-run, the weight of numbers. This means that only through a continuing and major effort at improving our industrial processes and the products of industry can we overcome this deficiency.

The procedure by which this is done has been called industrial research, and the research that is done by each company, or by entire industries through trade associations, is also a real contribution to national security. It must not be forgotten that wars are won by armies and arms, but it is the strength of the industrial nation behind them that makes the armies and the arms possible.

Forgetting for the moment the international front, the effect of industrial research on the maintenance of sound conditions within the nation are equally striking. Capitalism, irrespective of any action on the part of red Russia, is definitely under fire. It is questionable whether our national economy as we have known it can survive another national depression or period of extensive unemployment. A very major factor in avoiding a major depression and substantial unemployment is a continued and accelerated industrial research effort--continuing research in new and improved processes of production is necessary to increase the productivity of the country and thereby improve the standard of living. Expanding production will make possible lower costs and at the same time justify larger pay envelopes.

A necessary corollary, however, is the development of a continuous stream of new and improved products with which to tickle the fancy of the buying public.

Production alone would be insufficient, and, in the long run, all the advertising in the world will not induce sales without the urge to buy that is created by something new and a little different from that already in use. Consider television. The radio industry not so long ago was feeling very sick. The first rush to buy sets after the war had fallen off, and radios characteristically do not wear out with great rapidity. A new product, however, television, burst on the scene, and the radio manufacturing industry is now enjoying a boom of dimensions beyond their dreams in the immediate postwar era.

I again wish to point out that the national benefit from industrial research is the summation of individual benefits that accrue to each industry, trade association, and company undertaking an industrial research effort.

This is characteristic and is basic in our capitalistic system. In a country like Russia such an activity is instigated and controlled entirely by the central government. This is basic to Socialism. The individual initiative of the capitalistic system, however, also means that each industry, trade association, and company making up the industrial life of the country has a responsibility for keeping itself healthy and thereby keeping the whole organism healthy.

In this country a healthy industry or a healthy company means an industry or a company that is returning profits. Industrial research, therefore, like every other activity in American business, must pay off in profits. The proof of the pudding is in the eating.

Let's take a look at the results of about 30 industrial companies which, on the average, have spent 3% or more of their annual sales on industrial research. The Dow Chemical Company, for example, which spends almost 4% of its sales on research, has increased its sales since 1929 1150% and about 156% since 1941. Similarly, the net income of this company has increased 809% since 1929 and 174% since 1941. The Standard Oil Company of New Jersey, certainly a long established industry, reports that over the past decade they have received a gross return in

excess of $15.00 for every dollar invested in research.

Poor's Investment Service has compiled this list of 30 companies, which includes almost every type of manufacturing operation; and reports that these companies, over the past two decades, have increased sales 240% as compared to less than 102% for the national average. Over the same period their net earnings increased 160% as compared to 106% for total corporate profits. Similarly, dividends of these companies increased 83 1/2% as compared to 44.8% for all corporations.

To demonstrate the effect over an even shorter period of time, Commercial Solvents Corporation in their Annual Report state that, for the year 1949, gross profit derived from the sale of products developed within the past five years constituted approximately 40% of the corporation's total gross profit. The diversification which research has brought to this corporation is shown by the fact that in 1920 Commercial Solvents started with the biological production of three chemicals for use in two industries. Today, by both biological and synthetic processes, the corporation makes over 200 diversified products which serve every major industry.

These examples of the dynamic and constructive effects of industrial research should not blind us to the fact that what is constructive about industrial research for one industry may be dangerously destructive to another. The effect of the automobile on the carriage and wagon industry goes without saying. Even if industrial research does not kill an industry to the extent that occurred in this instance, it can seriously jeopardize the existence of an industry.

For example, the development of individual motor drives has eliminated the once common maze of belting from the industrial scene. The effect on the manufacturers of leather belting has, of course, been serious over a period of years. Similarly, the development of first rubber and then synthetic out-sole material has taken a substantial portion of the market of the leather sole manufacturers. Only

a vast expansion in the production of shoes has prevented more serious financial troubles for manufacturers in this industry.

The tragic part of these examples is that the destructive effects of industrial research were not entirely necessary. The very developments that have taken away such a large proportion of the market of the sole leather industry could have been used to expand their own sales to levels beyond even the heyday of that industry when it was the only source of material to put on the bottom of a shoe.

Rubber out-soles have been known and have been used for 30 years. The hint of the future was there. It is not at all beyond the realm of possibility that proper industrial research initiative and imagination by this industry could have made it possible for them to develop synthetic materials which would solve some of the weaknesses inherent in leather out-soles.

Is there any fundamental reason why a rubber company such as Goodyear should be the one to develop a product such as Neolite? There are certain reasons why Goodyear got into this industry, yes, but let us not forget that there are also reasons why the leather out-sole manufacturing industry was in many ways in a better position than the rubber industry to promote such a product. After all, the leather out-sole industry had the means of distribution, the established contacts, the knowledge of the shoemaking art, style requirements, and the specifications that a material must meet to be used successfully in shoemaking equipment.

I think it is safe to say that in most cases no industry need permit itself to be seriously injured by the research of others if it has the imagination, the initiative and the vigor to undertake a protective research program of its own.

Structural Clay Products Institute, trade association of the brick and tile industry, recognized that it was facing increasingly stiff competition from products developed in the research laboratories of other industries. Adopting the saying, "Only research can compete with research," this conservative industry has planned a five year research program and has raised $1,250,000 from its members.

Although I am primarily concerned with industrial research, the research activities of trade associations throughout the country are not limited to industrial or engineering and scientific research. Many associations have conducted research activities in accounting practices, business ethics, market research, research in distribution problems, standardization research, statistics and many others. An example of this is the Compressed Air Handbook published by your own association.

On the whole, these activities have been extremely successful. Research activity by a trade association must be directed toward the solution of a problem that is of great importance to the membership of the organization, but the association membership must also be conscious of the existence of the problem and must be prepared to use the results. Unless the problem to be solved by the research activity is of this type, the interest of the association from the standpoint of a large majority of the membership may not be solidly behind the endeavor.

The organization, planning, and operating problems of any research program are, of themselves, complex. If agreement on the objective cannot be reached at the beginning, it will be almost impossible to reach agreement as to execution.

Another requirement is that the problem to be solved be such that the participating companies will feel that they can take part in the program without revealing trade secrets and other specific information which they feel will weaken their competitive position. This second factor, a few years ago, was a very important consideration in limiting the development of trade associations as effective operating instruments. Today, industry pretty generally recognizes that there are broad areas in which it is of mutual advantage to exchange information with competitors.

Trade associations of all types are becoming increasingly interested in industrial research of a scientific and engineering nature, and many thereby have made an outstanding contribution to the welfare of their membership.

To mention only a few, the National Cottonseed Producers Association has carried on extensive research work in cooperation with the Department of Agriculture to establish both scientifically and in practice the actual or potential value of a wide variety of cottonseed products. As a result, the uses for cottonseed products have expanded enormously, which has been highly profitable for every member of the industry. This work has also been of value to users of these products because they have been taught how to use them effectively, in many cases with substantial savings over the products previously used.

The Glycerin Products Association, which is supported by practically the entire soap and glycerin industry, has carried on research for over 21 years. This has also resulted in a vast increase in the potential uses of glycerin and its derivatives, which again has resulted in expanding production in the entire industry.

The Pennsylvania Grade Crude Oil Association, an association of producers of Pennsylvania oil, has for years done research on a variety of problems affecting the entire industry. In recent years, for example, the association has hired Armour Research Foundation to develop methods whereby it is possible to identify with assurance whether a given oil sold at retail contains Pennsylvania oil. As has long been believed, some products were on the market claiming to be Pennsylvania oil that contained actually a very small proportion of oils derived from Pennsylvania crudes. These products, of course, were a constant source of concern not only because they represented price competition to the Penn Grade producers, but also because their lower quality served to lower the prestige of Pennsylvania oils in the minds of the consumer.

The Penn Grade Association now has a regular program of sampling all motor oils represented as Pennsylvania oil and uses the test procedures developed in the research laboratory to determine whether the use of the word "Pennsylvania" is justified. The protection that this gives the entire Penn Grade Association and

the value of the research results are self-evident. Recently, based on these tests, a company was ordered to cease representing its oil as Pennsylvania oil and was forced to make a penalty payment.

The Portland Cement Association and the Association of American Railroads are two other leading associations that have done extensive industrial research over a period of years. Both associations have recently completed industrial research laboratories costing about $1,000,000 each. The Edison Electric Institute is conducting an extensive program for the electric power industry supported by the leading power generating companies and the leading manufacturers of power generating equipment. The Association of Roller and Silent Chain Manufacturers has undertaken an extensive research program involving the study of impact forces. The results of this work not only have important effects on design of the products of the association, but also on many associated problems such as lubrication.

There are many others, including Bituminous Coal Research, Inc., American Gas Association, Lithographic Technical Foundation, National Renderers Association, American Foundrymen's Association, etc. All of these associations have demonstrated through continuing substantial annual expenditures that industrial research by associations is not only of value but is of major importance to the welfare of their respective industries.

There are various reasons why such associations undertake industrial research. Some of the benefits are as follows:

1. Many industry-wide problems can be studied and solved in this way that are too large for an individual manufacturer to justify.
2. Many small manufacturers who cannot support an industrial research activity of their own can, in this way, get the benefit of some research.
3. By conducting research on an industry-wide basis through a trade

association , the cost to each individual company is materially reduced through spreading the expense over a large number of companies.

4. Frequently trade association research can be performed at minimum cost because duplicating or overlapping research efforts by individual companies can be eliminated.
5. Trade association research that results in improved materials, processes, and products, expands markets for the industry's products or at least contributes to that industry's ability successfully to meet competition from other industries. All members of the association will get their normal share of such benefits.
6. Often through the vehicle of a trade association it is possible for an industry to obtain the benefit of the research activities of related industries and government agencies, which would not be made available to an individual company.
7. Frequently the trade association can serve as a means of compiling information and experience of all members which can be of major assistance in determining the approach to a specific research problem. In this way false starts may be eliminated and the hazard of blind alleys reduced, resulting in a major reduction in time and effort.

In general, every industry is facing actual or potential competition from the products of another industry. Every industry will find, upon examination, that its products have some very strong advantages in meeting this competition but also have some strong disadvantages, particularly with respect to certain specific applications. In many cases these disadvantages may apply to the products of each producer in the industry and not be merely specific to the design of one manufacturer. Any industry unable to benefit from an industry-wide research

program to strengthen its competitive position is an exceptional case.

However, before any association undertakes a research program, it must realize that research and development work on an industry-wide basis can be less effective in reaching the ultimate objective than similar research undertaken by a single company. Frequently, the objective of the program is not clearly stated, and the execution of the work is not carried out with complete consistency because of differences of opinion within the association. Even if the research program is comparatively successful, there is also the danger that members of the association will not adopt the results in as complete a manner as is necessary if the research effort is to result in commercial progress. All too frequently, the major objective is forgotten, and the association's research effort becomes diverted to solving day-to-day and minor production problems of individual members.

Before undertaking any research program, an association must agree as to the objectives of the program, and sufficient financial support must be guaranteed over a sufficient period to make the effort worthwhile. Adequate financing is essential since there is nothing more wasteful than doing research a little bit.

No appraisal of the potential value of industrial research to a trade association would be complete without some brief mention of the organization and procedures required to create a program and to implement it effectively. Operating a research program within a single organization is difficult at best. Operating the same program when many companies are involved, each with its own special interests, is even more difficult and constitutes the greatest hazard to the success of industrial research on a trade association basis.

The fact that it can be done successfully is evident, and the experience learned from this success indicates that there are three basic essentials:

--first, the selection and creation of a proper organization to prepare and execute the program

-- second, complete and adequate planning of the proposed endeavor with

the ultimate plan committed to writing

-- third, adequate financing over a reasonable period of time.

In creating an organization to carry out a research program, I strongly believe that central and unified authority is essential. Many associations have conducted successful research with a committee as the central authority. I do not believe, however, that a committee, particularly when it is composed of members of the association who can only give part-time services, is a satisfactory solution to the problem. A far better solution is the selection of a highly qualified man as Director of Research, giving him the responsibility for carrying out the objectives as defined by the membership. The selection of this man is, of course, critical as he must be a man of diverse talents, presumably with a good engineering and scientific background but, of equal importance, a man of business who knows the business requirements of industry and who can discuss these requirements intelligently with the membership. He will, of course, have the continuing problem of selling his concept of the program to the membership.

In many respects the problems of this man are no different from the problems of any Director of Research in industry today. He does, however, have a somewhat greater problem of selling his program and gaining the support of a less unified group than is generally found in a single industrial company.

This Director of Research should presumably report to a committee selected from the membership because of their influence on the operations of the association and also because of their interest and experience in industrial research. I would suggest that this committee be limited in size, certainly not in excess of ten members. This committee should develop with the Director of Research the objectives of the research program. Usually this will mean that the Director of Research will create the program and submit it as a suggestion to the committee for their approval. Once the research program has been approved,

the execution of it should be left wholly in the hands of the Director of Research except for occasional review by the committee, but even this at not too frequent intervals.

Placing this responsibility on one individual is even more essential in industrial research than it is in the operations of an industrial company. There is no activity in modern industry that requires more judgment based on fewer facts than does industrial research. Industrial research is a process for developing something new. It is delving into the realm of the comparatively unknown. Predictions as to results, predictions as to the risks involved, predictions as to the effect on an industry or a company, cannot be made on any scientific basis. Decisions are based on opinions--or even hunches-- that are difficult to substantiate conclusively. It is to be expected under these circumstances that no group of men can be in complete agreement. Their differences of opinion will make it extremely difficult for any committee to make the decisions required.

In undertaking any industrial research program, one of the major problems is to select projects for study and development that are not only feasible but that fulfill the two requirements that have already been mentioned. These requirements you will recall were that the projects must cover problems that are industry-wide and that, in addition, are recognized as problems by all the membership.

If the particular association involves an industry in which only a minimum of research has been done through the years by individual members, the problem of selecting appropriate projects is much simplified. If, on the other hand, the association is composed of member companies who have carried on extensive research activities over a period of years, determining what projects are appropriate is much more difficult.

However, I firmly believe that the members of any association will benefit from an examination of their problems and difficulties and from undertaking a

research program in an effort to solve them. The type of thinking required in such a soul-searching activity is itself frequently enough to cause the members of an association to realize weaknesses in their overall competitive position for the first time. Everyone in business today is well aware of the fact that the pressure of day-to-day problems gives too little time for a company or an industry to examine its relative position, particularly from the standpoint of its long-run future.

A first step in selecting appropriate projects is to ask individual members of the association about their most pressing problems. This can be done by a written questionnaire, but, as a rule, it will be far more effective if done by personal interview by members of a small committee organized to undertake this activity. All members of the association do not need to be contacted, as a representative sample may be quite adequate. By compiling the list of problems, it is usually apparent what problems are met by virtually all members of the association. Many of these problems may not be suitable for association activity, but, after some study, projects appropriate for industrial research will usually be self-evident.

In the case of Structural Clay Products Institute, this type of investigation was made by an outside agency, which reported its findings in a well organized, clearly understood report. The procedure was very successful, but many associations have been equally successful in undertaking this type of investigation themselves.

Our final consideration is how much money an association should appropriate to finance an industrial research program. As in everything else about industrial research, there is no absolute answer to such a question. The circumstances and requirements of each industry vary, and the cost of research will also vary with the type of project.

I can only utter a word of caution: do not make the appropriation too

small or for too short a period of time. Certainly, if the project is worth doing, it will probably require at least one year and the work of at least one full-time scientist or engineer. On this basis, the annual appropriation should probably not be less than $15,000, and a much higher appropriation may be necessary and for a far longer period of time than one year. Good research takes time and costs money, but it is the only kind that will bring results. As in war, too little too late can bring failure.

Industrial research is an involved and complicated activity, but every member of the business community should engage in it not only for the future of each individual business and industry, but also for the future prosperity of the nation. Let's not forget, there are always more reasons for not undertaking a research program than there are for doing it. It is not, however, this type of thinking, this unwillingness to gamble for big returns, this unwillingness to invest in our long-run future that has made this country the progressive and strong industrial nation it is today.

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Mailed: September 27, 1950

FOR RELEASE: Immediate

CHICAGO -- An amazing exhibition of high speed photography by Dr. Harold E. Edgerton of the Massachusetts Institute of Technology electrical engineering department will be shown October 2-22 at the Institute of Design of Illinois Institute of Technology.

In the photographs, Dr. Edgerton has combined photography with the latest stroboscope and electronic discoveries. Some of the unusual pictures were taken at a speed of 1/1,000,000 of second.

Among the 68 photos in the exhibition are single and multi-flash exposures of dancers, high divers, ice skaters, aerial trapeze artists, track runners, rodeo riders, and tennis players. They show hummingbirds, action of golf balls, footballs, automobile tires, malaria mosquitoes sucking blood, fighting birds, and can-can dancers.

The exhibit will be held in the auditorium of the Institute, 635 North Dearborn street. If is free and open to the public.

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Mailed: September 27, 1950
FOR RELEASE: Immediate

CHICAGO -- Marion H. Groves, former chief psychologist for the Cook County Criminal Court Behavior Clinic, has been appointed assistant professor of psychology at Illinois Institute of Technology, it was announced today by John D. Larkin, dean of liberal studies.

Groves, a native of Medicine Lodge, Kansas, received his bachelor's degree in 1933 at Phillips University, Enid, Oklahoma, and his doctor's degree at the University of Chicago in 1945.

He headed the behavior clinic from 1943 to 1945. From 1945 to 1947 he was an instructor in psychology at the University of Chicago, and lectured on psychology at the University of California from 1947 to 1949.

Groves is a member of the American Psychological Association and the Society of Sigma Xi. He is 40, married, and lives at 3025 South Oak Park avenue, Berwyn.

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Mailed: September 27, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. William R. Osgood, former structural engineer for the David Taylor Model Basin, Washington, D. C., and materials engineer of the National Bureau of Standards, has been named director of the department of mechanics at Illinois Institute of Technology.

The appointment was announced today by Dr. John T. Rettaliata, dean of engineering.

Dr. Osgood, a native of Cambridge, Massachusetts, graduated cum laude in liberal arts from Harvard University in 1917, and was awarded a bachelor of science degree in 1919 at Massachusetts Institute of Technology.

He received his master's degree in 1926, and his doctor's degree in 1933, both at the University of Illinois.

He was an instructor in mechanical engineering at the University of Illinois from 1921 to 1926, and was an assistant professor at Cornell University from 1926 to 1929 when he joined the bureau of standards. He left there in 1946 to begin work in the Model Basin where he remained until his appointment at Illinois Tech.

Dr. Osgood is the author of more than 50 technical papers in mechanics and structural engineering, and is a member of American Society of Civil Engineers, American Society of Mechanical Engineers, Society of Experimental Structural Analysists, Washington Academy of Sciences, and Column Research Council.

He lives at 5236 Cornell avenue in Chicago.

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September 29, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- To the average motorist, a quart of oil is a quart of oil... and nothing more. Although most car-owners appreciate the necessity of periodic oil-level checks, they don't realize that two quarts of oil, selected at random, can vary greatly in quality.

At Armour Research Foundation of Illinois Institute of Technology, a system has been set up to prevent oil that did not come from the Pennsylvania fields from being misrepresented. This program is sponsored by the Pennsylvania Grade Crude Oil Association.

According to Dr. Walter C. McCrone, supervisor of the Foundation's analytical chemistry group, quart samples of oil are purchased from filling stations all over the country and abroad and sent to the oil analysis laboratories for checking.

At the Foundation, three procedures have been developed to tell whether an oil sample is Pennsylvania, non-Pennsylvania, or a mixture of the two. Differences are detected by infrared spectrophotometry, precision density calculations, and refractive index measurements.

The infrared method is based on differences in color. Although the human eye can identify certain objects such as rain clouds and state police cars by color alone, it has its limitations. Taking over where the human eye leaves off, the infrared method detects minute variations in color composition.

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Generally speaking, this method will identify oils wholly from Pennsylvania or non-Pennsylvania sources.

Precision density refers to the weight of an oil sample and can be roughly compared to our ability to tell lead from aluminum by noting the mass of both.

The third method, refractive index measurements, is best defined as the speed with which light travels through a sample of oil. Just as a rifle bullet is slowed down when it enters water, the speed of light decreases when it encounters a substance which is denser than air. This method is also used to detect the adulteration of one oil by another.

It is hoped that a procedure may be developed before long which will enable analytical chemists to distinguish between oil which has not yet been used and oil which has been reclaimed by a cleaning process designed to remove sludge and other foreign material.

There is every possibility, Dr. McCrone said, that a motorist may be paying for high-grade oil which sells for up to forty-five cents a quart and actually be receiving an inferior, reclaimed oil which should sell for about fifteen cents. This can easily result in damaged engines and greater oil consumption.

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Mailed: October 2, 1950
FOR RELEASE: Advance

Note to City Editors:

Following is a resume of a speech to be given by Dr. John T. Rettaliata, dean of engineering at Illinois Institute of Technology and vice president of the American Society of Mechanical Engineers, on the performance of jets in Korea.

Dr. Rettaliata, one of the nation's foremost experts on jet propulsion, will speak at 8 p.m., October 5 in the New Frontiers of Science program at Roosevelt College.

--- Jim Armsey

ADVANCE FOR RELEASE AFTER 9:30 P.M. (CST) THURSDAY, OCTOBER 5, 1950

THE JET PLANE IN THE KOREAN CONFLICT

The Korean war is the first in which American jet planes have seen actual combat duty. Despite extremely unfavorable operating conditions, and notwithstanding some reports to the contrary, the jet is giving a good account of itself in combat. It can be reasonably stated that it has prevented a Korean Dunkerque. It is unfortunate, however, that this plane should receive its baptism in a type of war for which it was never intended. In a relatively undeveloped country like Korea, where the pack mule and the coolie are frequently superior to modern military transport, it is difficult to employ latest military developments to advantage at all times.

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The jet plane is a high speed, shorter range, type of aircraft which has been handicapped by a lack of adequate airfields in the vicinity of the combat zone. The F-80 jet fighter, the kind being used in Korea, has a range approximating 1000 miles. It has been operated from bases in Japan, about 400 miles from the battle line, with the result that the pilot has only about 10 or 15 minutes combat time at the scene of the fighting before he has to return to his base for refueling. Poor weather conditions have also forced the jet to launch rockets at 3000 feet altitude instead of a more desirable elevation of 5000 feet. Consequently, the gliding, instead of diving, approach has caused some rockets to richochet off of enemy tanks without apparent damage.

The F-80 has been used for low-level strafing although it was never designed for such service. Its high speed makes this a difficult operation but it can still be used for this purpose, providing adequate ground-air communications exist for pilot direction. The ineffectiveness of the communication system in Korea has reduced the performance capabilities of the F-80 through no fault of the plane itself. A recent example of faulty communications is the error bombing of British troops by American planes. In a fighter plane high speed is always an asset and the pilot with the fastest ship has the advantage, whether he be engaged in aerial combat or getting away from enemy anti-aircraft fire after launching a rocket attack.

The F-51 piston engine-propeller fighter plane has been operating from bases in Korea and has done a creditable job. Much of its effectiveness, however, is due to the fact that the enemy has used practically no air power. When and if he does, the jet plane, due to its superior speed, will be the only adequate counter-measure, particularly if the enemy should use jets.

Any jet planes employed by the North Korean communists would obviously be supplied by Russia, which has several very good types. The best Russian jet

-more-

fighter is the Yak, reportedly capable of speeds up to 650 miles per hour. The Yak design reflects the influence of several countries. In outward appearance it resembles the American F-84. The many German jet engineers captured by the Russians have also undoubtedly contributed to the Russian jet program. Ironically, the chances are that any Yaks to appear in the Korean conflict would be powered by jet engines sold to the Russians by the British. The same engine is used in some American Navy jet fighters. For a country which has claimed parentage to so many new inventions, Russia has shown a surprising lack of originality in its aircraft designs.

In conclusion, the F-80 jet plane operating in the Korean war is doing a remarkable job considering the many obstacles and unfavorable conditions with which it has to cope. Much of the criticism which has been directed at it could more properly be applied to our military unpreparedness, brought about by a too drastic economy program which has resulted in inadequate supporting operations necessary to the satisfactory utilization of jet planes.

END ADVANCE FOR RELEASE AFTER 9:30 P.M. (CST) THURSDAY, OCTOBER 5, 1950

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October 3, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- The Institute of Design of Illinois Institute of Technology will present a lecture by Gyorgy Kepes on "Expression in Architecture" at 8 p.m., October 10.

Kepes, professor of architecture at Massachusetts Institute of Technology, is author of the popular book, "Language in Vision."

He is a former member of the staff of the Institute of Design and one of the best-known men in the field of visual expression in the United States.

The lecture will be held in the auditorium of the Institute, 635 North Dearborn street. It is free and open to the public.

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Mailed: October 3, 1950
FOR RELEASE: Immediate

CHICAGO -- Gordon W. Johnson, chief metallurgist at American Hoist and Derrick Company, St. Paul, Minnesota, has been named supervisor of foundry process research at Armour Research Foundation of Illinois Institute of Technology.

Johnson's appointment was announced recently by Dr. Carl E. Swartz, chairman of the Foundation's metals department.

In his new position, Johnson will supervise research projects in casting techniques and other foundry problems. He has specialized in alloy cast steels and galvanizing processes.

Johnson graduated from the University of Minnesota in 1938 and joined the American Hoist and Derrick Company at that time.

Johnson is 33 and a past chairman of the Twin Cities chapter of the American Society for Metals.

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Mailed: October 3, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Richard C. Steinmetz, authority on criminal arson and chief special agent for the Mutual Investigation bureau, will discuss "Arson and the Fire Protection Engineer" at 8 p.m. Friday (Oct. 6) at Illinois Institute of Technology.

Sponsored by the Institute's fire protection and safety engineering society, the lecture will be held in the lounge of the Student Union building, 33rd and Federal streets.

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Mailed: October 4, 1950

FOR RELEASE: Immediate

CHICAGO -- Walter W. Hill, 25, of 741 East 50th street, will head the men and boy's program at the Ada S. McKinley Community House, it was announced today by William R. Hammond, director.

This social agency, located at 3201 South Wabash avenue, provides an educational and recreational program for underprivileged persons of Chicago's near south side, and last year served more than 3,000 adults and children.

Hill earned his master's degree this June at Atlanta University School of Social Work, Atlanta, Georgia.

A native of Montgomery, Alabama, he graduated from Alabama State Laboratory high school there in June, 1942 and received his bachelor's degree in sociology at Morehouse college, Atlanta, Georgia, in June of 1948.

In World War II, he served 17 months overseas during his 32 months in the U.S. Army Air Corps and Infantry.

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Ada S. McKinley Community House
3201 South Wabash Avenue
Chicago 16, Illinois

Ada S. McKinley Community House
3201 South Wabash Avenue
Chicago 16, Illinois

Mailed: October 4, 1950

For Release: Immediate

CHICAGO -- Walter W. Hill, 25, son of Mr. and Mrs. John L. Hill, Sr. of 1503 Harriet street, Montgomery, Alabama, will head the men and boys' program at the Ada S. McKinley Community House in Chicago. Announcement was made today by William R. Hammond, director.

This social agency provides an educational recreational program for underpriviledged persons on Chicago's near south side, and last year served more than 3,000 adults and children.

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A graduate of Alabama State Laboratory high school, Montgomery, in June of 1942, he received his bachelor's degree in sociology at Morehouse college, Atlanta, in June of 1948.

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Mailed: October 5, 1950
FOR RELEASE: Immediate

CHICAGO -- A radically new aid to industrial management will be demonstrated to engineers and business executives when the Chicago chapter of the Society for the Advancement of Management holds its annual Industrial Engineering Conference October 12 and 13 at Illinois Institute of Technology.

The new system, Methods-Time-Measurement, or MTM, analyzes workers' motions in industrial operations. MTM reduces all industrial activities to basic motions, classifies them, and uses them to determine time values for almost any job. Motion pictures, rather than the traditional stop-watch, are used.

Although this will be a meeting of the Chicago chapter of the society, requests for reservations have come from 18 states. About 200 are expected to attend.

"MTM is reported to be saving hundreds of thousands of dollars for those companies that have adopted it," says Robert E. Arndt, associate engineer at Armour Research Foundation of Illinois Institute of Technology and general conference chairman.

The conference will consist of lectures, discussions, and demonstrations. W. K. Hodson, engineering manager of Methods Engineering Council, Pittsburgh, Pa., the firm which originated MTM, will describe the system. Several factories in the Chicago area will set up machines at the conference to illustrate typical industrial processes to which MTM can be applied.

Other speakers include Dr. Henry T. Heald, president of Illinois Tech; B. M. Sayre, senior partner of B. M. Sayre & company; and Henry P. Dutton, professor of industrial engineering at IIT.

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Mailed: October 5, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 6 P.M. (CST) MONDAY, OCTOBER 9, 1950

CHICAGO -- Illinois Institute of Technology's 10-year record of service and growth was outlined today by Dr. Henry T. Heald, Institute president, in his annual report to the Board of Trustees.

In reviewing the progress of Illinois Tech since its formation in 1940 through the merger of Lewis and Armour Institutes, Dr. Heald cited specific advancements in education, research, and urban development from 1940 through 1949.

Enrollment increased from 5,932 to 8,256 (day and evening students).

Assets grew from $5 million to more than $17 million.

The annual operating budget rose from $1.7 million to $9.5 million.

Eight new degree-granting fields of undergraduate study and 13 fields of of graduate study were added.

Land holdings were extended from 7 acres to 85 of a proposed 110, and 67 were cleared, improved, or rebuilt.

As a result of wide support for the Institute program, more than $10 million was invested in land, buildings, and equipment.

There are now nearly a million square feet of space in use as classroom, laboratory, administrative, and residence areas more than three and a half times the usable space in 1940.

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Last year 1,040 undergraduate and 101 graduate degrees were awarded, as compared with 362 undergraduate and 25 graduate degrees in 1940.

Of the Institute's educational program, Dr. Heald stated, "Trends in undergraduate curricula in the past 10 years have been in the direction of greater emphasis on fundamental science, more attention to general education, and a reduction in specialized applied courses.

"Technology has tended to become more fundamental, and engineering courses place increasing emphasis upon mathematical and scientific content. Undergraduate engineering education today provides a sound foundation in fundamental principles and limited practice in applications."

One of the major educational advances mentioned by Dr. Heald was the addition in 1949 of the Institute of Design as a degree-granting department of Illinois Tech.

"Its pioneer work in industrial design, visual communications, and photography unfolds another logical area for Institute service to industry. Its close relationship to engineering, science, and architecture makes its program a natural and logical part of the Institute's development."

Graduate work leading to master's and doctor's degrees has shown a marked increase during the decade of Illinois Tech's growth, Dr. Heald reported. Last year 12 per cent of the enrollment was at the graduate level.

"The tremendous advances in technology during the past half century have added constantly to the store of knowledge with which the proficient practitioner must be familiar. It is scarcely possible today to acquire more than a general background in four years, and the trend is unmistakably toward more formal education at the graduate level.

As a center of engineering and applied science, Illinois Tech has geared

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its program of research to the assistance of industry and government.

Armour Research Foundation of Illinois Institute of Technology, established in 1936 to provide a not-for-profit center of applied research, began with a staff of three scientists and a first annual research volume of $40,000. Today its full-time staff numbers 655, and its research volume last year exceeded $4.5 million.

"This phenomenal growth, "which has made the Foundation one of the three largest research organizations of its type in the country, is explained, "Dr. Heald said, "by industry's recognition of science and technology as a vital competitive aid, a means of avoiding obsolescence and stagnation, and a method of solving technical problems."

Of the extensive development program which is raising a modern college campus in the heart of what was once America's largest slum area, Dr. Heald commented, "an important by-product of the program is the stimulus it has provided for the redevelopment of the whole central south side of Chicago. Other private and public projects promise in a few short years to restore one of the nation's largest and worst blighted areas."

Dr. Heald paid tribute to the work of the Institute of Gas Technology, a major center of education and fundamental research on the campus. Founded in 1941, it has proved of inestimable value to the gas industry. Early this year, the facility occupied one of the new buildings on the growing campus.

He also noted the addition a year ago of the Central Research Laboratory of the Association of American Railroads. This unit serves as the association's headquarters for engineering, mechanical, and sanitation research, and for studies on refrigerator cars, containers, and other research problems of the railroad industry.

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END ADVANCE FOR RELEASE AFTER 6 P.M. (CST) MONDAY, OCTOBER 9, 1950

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Mailed: October 6, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Giorgio Abetti, professor of astronomy and director of the observatory at the University of Florence, Italy, will address the first meeting of the Illinois Institute of Technology chapter of Sigma Xi, honorary research society.

He will speak October 11 on "Galileo the Astronomer."

Dr. Abetti, director of the Astrophysical Observatory of Arcetri, president of the Italian Astronomical Association, of the International Commission for Solar Terrestial Relations, and vice president of the International Astronomical Association, is the author of numerous papers on the properties of astronomy and history of science.

The lecture will be held at 8 p.m. in the Chemistry building auditorium, 33rd and Dearborn streets. A reception for Dr. Abetti will be held after the meeting. The lecture is free and open to the public.

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Mailed: October 6, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 6:00 P.M. (CST) MONDAY, OCTOBER 9, 1950

CHICAGO -- Research appropriations invested by sponsors of projects at Armour Research Foundation of Illinois Institute of Technology reached a total of $4,614,958 during the fiscal year ended August 31, 1950.

This represents an increase of 12.1 per cent over the Foundation's volume for the previous year, Dr. Haldon A. Leedy, director, reported today to the Board of Trustees of the Foundation.

The Foundation's gross volume, he explained, includes all monies paid for the performance of research and development work by industries, government agencies, industrial associations, and individuals who employ Armour's facilities.

The Foundation is a non-endowed, not-for-profit scientific research and development organization founded in 1936 to provide a research and experimental engineering service to industry.

The Foundation has budgeted an expansion of approximately 17 per cent for the 1950-51 fiscal year, Dr. Leedy revealed.

Dr. Leedy also reported that:

Foundation scientists worked on 337 research projects during the fiscal year. Of this total 182 were sponsored by industry, 94 by government agencies, and 61 by the Foundation itself.

A total of 220 research projects were either begun or renewed.

The Foundation spent $285,000 on new equipment and buildings. Major

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construction activity was a new Physics Research building with 24,000 square feet of laboratory and office space.

There are 660 full-time staff members, an increase of 30 over the previous fiscal year. Technical personnel total 432, an increase of 10.5 per cent over 1948-49.

Fields of interest of the Foundation include physics, metals, chemistry and chemical engineering, applied mechanics, electrical engineering, ceramics and minerals, magnetic recording, and international research.

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Mailed: October 6, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 6 P.M. (CST), MONDAY, OCTOBER 9, 1950

CHICAGO -- Six new members were added to the board of trustees of Illinois Institute of Technology at the Institute's annual board meeting tonight, it was announced by James D. Cunningham, chairman of the board of trustees.

They are:

Harry C. Murphy, president of the Chicago, Burlington, and Quincy railroad.

Nathaniel A. Owings, partner in the architectural firm of Skidmore, Owings, and Merrill.

James G. Shennan, president of the Elgin National Watch Company.

Charles H. Percy, president of Bell and Howell Company.

Albert B. Dick, III, president of the A. B. Dick Company.

Francis X. Mettenet, vice president in charge of sales, Peoples Gas, Light, and Coke Company (named as alumni representative for a three-year term).

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Editor's Note: biographies are attached.

Harry C. Murphy

Harry C. Murphy, president of the Chicago, Burlington & Quincy railroad, was born August 27, 1892 in Canton, Illinois. He moved with his family to Eldora, Iowa in 1898 and during his summer vacations while in high school there worked for the Iowa Central railroad, now the Minneapolis and St. Louis railway.

After graduating from high school in Eldora, he attended Iowa State College at Ames, studying civil and mechanical engineering and later attended Armour Institute, forerunner of Illinois Tech.

In 1914 he began work in the Burlington auditing department, but a few months later transferred to the engineering department as a rod man. In 1923 Murphy went to Omaha as engineer of maintenance of way. Later he became assistant to the manager of lines west. He was appointed assistant to the executive vice president in 1936 and since 1939 has been in charge of operations for the road.

He succeeded Ralph Budd as president following Budd's retirement August 31, 1949. Murphy is a director of the First National Bank of Chicago and a member of the board of trustees of Doane college, Crete, Nebraska. He lives at 441 Oak avenue, Aurora, Illinois.

Nathaniel A. Owings

Nathaniel A. Owings, partner of Skidmore, Owings, and Merrill, Architects, New York, Chicago, San Francisco, and Oak Ridge, was born February 5, 1903 in Indianapolis, Indiana. After attending the University of Illinois, he was graduated from the Cornell University college of architecture in 1927.

From 1927 to 1930 he worked as an architectural designer for various New York architectural firms. He was development supervisor of the Century of Progress in Chicago from 1930 to 1934. The following two years he did research study in Japan, China, India, and Egypt, and in 1936 became a partner in Skidmore, and Owings, architects, with New York and Chicago offices.

He is a fellow of the American Institute of Architects and director of the AIA executive committee. He is a member of the Society of American Military Engineers, Illuminating Engineers Society, American Hospital Association, Commonwealth Club, Commercial Club of Chicago, Wayfarers club, Tavern Club, Chicago Club, Attic Club, Illini Club and Cornell Club.

He lives at 1240 North State street.

James G. Shennnan

James G. Shennan, president of the Elgin National Watch Company, Elgin, Illinois, was born in 1910 at Hazleton, Pennsylvania.

He attended prep school at Blair Academy, Blairstown, New Jersey, and received his bachelor of arts degree in 1932 at Princeton University. After graduation he enrolled in the Elgin company's training program, and later began work in the time-study department.

His rapid rise through the company ranks brought him to a post as factory superintendant in 1938. In 1942 he was named second vice president, and four years later was appointed vice president in charge of manufacturing. In June 1947 he became executive vice president, a post he held until his appointment as president following the retirement of T. Albert Potter in March, 1948.

He is a director of the National Association of Manufacturers, a member of the advisory committee to the Princeton department of economics, and a member of the Chicago and Commonwealth Clubs.

Charles H. Percy

Charles H. Percy, president of Bell & Howell Company, Chicago, was born September 27, 1919 in Pensacola, Florida. Six months later his family moved to Chicago.

After graduation from New Trier High school in Wilmette, he enrolled at the University of Chicago and worked during the summers, Christmas vacations, and weekends in various departments of Bell & Howell.

Upon graduation in 1940 he was named manager of the Company's new Defense Coordinating Department, handling all phases of government business and contracts. When he left for service in the U. S. Navy, in 1942 he was named to the Company's board of directors.

After three years in the Navy, he returned to Bell and Howell in charge of industrial relations, personnel management, and foreign manufacturing programs. In 1946 he was named secretary, and in January, 1949, was named president.

He is a member of the American Society of Sales Executives, the Photographic Society of America, the Economics Club, Chicago Club, and Commonwealth Club, and the board of directors of the University of Chicago Alumni Foundation. He is married, has three children, and lives in Wilmette, Illinois.

Albert B. Dick III

Albert B. Dick III, president of the A. B. Dick Company, Chicago, was born March 10, 1918 in Lake Forest, Illinois. After attending Bell School in Lake Forest and Hotchkiss School in Lakeville, New Jersey, he went to Yale University.

In 1939 he began training with the A. B. Dick Company, founded by his grand-father, Albert Blake Dick, inventor and developer of Mimeograph. His training was interrupted in April 1942 when he went in the U. S. Navy.

After service as a Naval Ordnance officer in the United States, and duty aboard the U. S. S. Detroit in the Pacific, he returned and resumed his training in the company. Following a succession of advances, he was named president and treasurer of the Company in November, 1947.

He is married, the father of three sons, and lives in Lake Forest. He is a director of the Economics Club of Chicago, and the Office Equipment Manufacturers Institute, and a member of the executive board of the Skokie Valley Industrial Association.

Francis X. Mettenet

Francis X. Mettenet, vice president in charge of sales for the Peoples Gas, Light, & Coke company, Chicago, was born August 22, 1890 in Winnipeg, Canada. After graduation from Lewis Institute, forerunner of Illinois Tech, in 1909, he attended Cornell University and was awarded a bachelor's degree in mechanical engineering.

Mettenet was power sales engineer with Commonwealth Edison company, Chicago, from 1912 until 1923, when he became sales manager of Northern Indiana Public Service Company, Hammond, Indiana. In 1929 he became general sales manager for Public Service of Indiana at Indianapolis. He remained there until 1936 when he assumed his present position.

He is a member of the South Shore Country club, Beverly Country Club, Illinois Athletic Club, and vice president of the Illinois Tech Alumni Association. He lives at 6901 South Oglesby avenue, Chicago.

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Mailed: October 9, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE TO AFTERNOON NEWSPAPERS OF WEDNESDAY, OCTOBER 11, 1950

CHICAGO -- Dr. Henry T. Heald, president of Illinois Institute of Technology, today announced the appointment of three vice presidents. They are:

Dr. John T. Rettaliata, 39, dean of engineering, becomes vice president for academic affairs and continues as dean.

Raymond J. Spaeth, 43, executive secretary and treasurer, becomes vice president for business affairs and continues as treasurer.

Dr. Haldon A. Leedy, 40, director of Armour Research Foundation of Illinois Institute of Technology, becomes vice president of the Foundation and continues as director.

(Dr. Heald is president of the Foundation.)

Born in Fremont, Ohio, Dr. Leedy received his bachelor's degree from North Central College, Naperville, Ill., in 1933 and his master's degree from the University of Illinois in 1935.

He joined the Foundation staff in 1938 as a physicist immediately after receiving his doctor's degree at the University of Illinois. He became chairman of the physics department of the Foundation in 1944 and was advanced to director in 1948.

Dr. Leedy has spent his entire professional life in helping the Foundation grow to its present position as one of the nation's most important and largest

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scientific and technological research organizations.

He is a fellow of the Acoustical Society of America, member of the American Society for Testing Materials, senior member of the Institute of Radio Engineers, president of the Physics Club of Chicago, and member of the American Institute of Electrical Engineers, the executive and planning committees of the National Electronics Conference, and the board of directors of the Greater Chicago Noise Reduction Council.

Dr. and Mrs. Leedy and their three-year-old daughter Marilyn live at 4729 Woodland avenue, Western Springs, Ill.

Mr. Spaeth joined the staff of Illinois Tech as business manager in 1940 shortly after the Institute was formed through the merger of Armour and Lewis Institutes. He was initially in charge of plant operation and maintenance, purchasing, and general office services.

Two years later he was named treasurer and in 1945 was promoted to executive secretary and treasurer. He is also treasurer and assistant secretary of Armour Research Foundation of Illinois Institute of Technology and secretary-treasurer of the Institute of Gas Technology.

A native of Salina Kans., he was graduated from the American University, Washington, D. C., in 1930. He obtained a master's degree in business administration from the Harvard Graduate School in 1932. From then until he joined the Illinois Tech staff, he was assistant business manager and bursar at the American University.

Mr. and Mrs. Spaeth and their two children, Ray Jr., 13, and Ruth Jr., 8, live at 10825 Fairfield avenue in Berverly Hills (Chicago).

Dr. Rettaliata was born in Baltimore, Md., received his bachelor's and

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doctor's degrees in engineering in 1932 and 1936 at the Johns Hopkins university. He joined the Allis-Chalmers company in 1936 and became manager of gas turbine research and development.

He came to Illinois Tech in 1945 as director of the department of mechanical engineering and was promoted to dean of engineering in 1948. He is currently vice president of the American Society of Mechanical Engineers.

A leading authority on gas turbines and jet propulsion he has received numerous awards for his scientific work, among them a special study for the national Academy of Science (1940), the junior award from the American Society of Mechanical Engineers (1941), and the Pi Tau Sigma gold medal award (1942).

During World War II, he twice visited the European theater, once in 1943 to investigate jet propulsion aircraft and again in 1945 to study steam turbines developed by the Germans for hydrogen peroxide submarine operations. For the latter service, he received a special Navy commendation.

Dr. and Mrs. Rettaliata and their two sons, Brian, 7, and Stephen, 3, live at 9712 South Winchester avenue, Chicago.

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Mailed: October 10, 1950
FOR RELEASE: Immediate

CHICAGO -- A $13,700 research grant has been awarded to Dr. Max M. Frocht, research professor of mechanics at Illinois Institute of Technology, by the National Advisory Committee for Aeronautics.

The grant will provide for an investigation to develop a general method for thee dimensional photoelastic stress analysis.

Photoelasticity is an experimental method for determining stress by applying loads to transparent models of real objects in a polariscope and analysing the pattern produced by the light through the model.

Until recently photoelasticity has been confined mainly to two dimensions, the stress in depth assumed to be constant. In three-dimensional work, studies have been mostly limited to symmetrical objects.

Dr. Frocht's work will be to extend the scope of photoelasticity to general problems and improve the methods for symmetrical problems. It will include a study of fundamental principles, prefecting methods, techniques, and equipment, and applications to practical problems.

The study today rests, in the main, on the ability to permanently fix a pattern into a material after the loads have been removed.

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Director of Public Relations — James W. Armsey
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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: October 10, 1950
FOR RELEASE: Immediate

CHICAGO -- Illinois Institute of Technology will sponsor a series of seven art and design exhibits during the academic year.

The first exhibit will be held October 18 through November 8 in the first floor lobby of the Metallurgical and Chemical Engineering building, 10 West 33rd street. It will feature 100 photographs of students of the Institute of Design of Illinois Institute of Technology.

The series, selected by a committee of faculty and students, is designed to encourage appreciation and cultivate interest in art in the engineering college.

It will include exhibitions of paintings and drawings by Paul Wieghardt, oils and watercolors of Marie Blanke, paintings and sculptures of Jean (Hans) Arp, work in visual communication by Hans Schleger, and industrialization in building construction by students of the Institute of Design.

All exhibitions will be held on the Illinois Tech campus and are free and open to the public.

-jeg-

from

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Mailed: October 11, 1950
FOR RELEASE: Immediate

CHICAGO -- John P. Sanger, member of the Hoover Commission and vice president of U.S. Gypsum Company will address attendants at the sixth annual National Conference on Industrial Hydraulics at a general dinner meeting October 18 in the Sherman Hotel.

He will speak on "The Findings of the Hoover Commission and What you Can Do About Them."

More than 600 engineers and hydraulics specialists are expected to attend the two-day meeting, October 18 and 19. Twenty papers on 11 phases of hydraulics will be presented.

Major addresses will also be given by Dr. Haldon A. Leedy, director of Armour Research Foundation of Illinois Institute of Technology, at the luncheon meeting October 18 on "Research in Latin America," and Raymond D. Meade, former director of the Korea Technical Institute, at the luncheon session October 19 on "Observations in Korea."

Otto J. Maha, president of the Hannifin Corporation, Chicago, is director of the conference. Frank W. Edwards, director of civil engineering at Illinois Tech, is conference secretary.

The conference is sponsored by the Graduate School of Illinois Tech and Armour Research Foundation with the cooperation of the Western Society of Engineers, American Society of Lubrication Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, Society of Automotive Engineers, American Institute of Chemical Engineers, Institute of Aeronautical Sciences, and American Society of Agricultural Engineers.

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Mailed: October 11, 1950
FOR RELEASE: Immediate

CHICAGO -- Illinois Institute of Technology has resumed its off-campus program at the Argonne National Laboratory.

The course in engineering mathematics being presented at the DuPage site of the laboratory by Dr. Shien-Siu Shu, assistant professor of mathematics at Illinois Tech, is a continuation of the program begun last spring.

Enrollment is limited to employes of the AEC laboratory and its affiliates. It is possible that the course may be extended to include courses in chemistry, physics, other matheamtics, and several branches of engineering.

Illinois Tech is also continuing its other off-campus programs at Caterpillar Tractor Company in Peoria and Allis-Chalmers Company in West Allis, Wisconsin.

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Mailed: October 11, 1950
FOR RELEASE: Immediate

CHICAGO -- Roscoe Guernsey, Jr., assistant professor of mechanics at the University of Texas, has been awarded a $2,500 fellowship established at Illinois Institute of Technology by the Research Corporation, Brooklyn, for study in photoelastic stress analysis.

The fellowship, leading to a doctor's degree in mechanics, provides for a research project in three-dimensional photoelasticity.

Guernsey a native of Leonia, New Jersey, received his bachelor of arts degree at Columbia University in 1938, and his master's degree there in 1940. Since that time, he has taught at the University of Texas.

He is 33, married, and lives at 3340 South Michigan avenue in Chicago.

-jeg-

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Mailed: October 11, 1950
FOR RELEASE Advance

ADVANCE FOR RELEASE AFTER 12 NOON (CST) THURSDAY, OCTOBER 12, 1950

CHICAGO -- To meet the demands of a combined civilian-military economy, industry must use its engineering manpower more effectively at the highest level of competence, Dr. Henry T. Heald, president of Illinois Institute of Technology, said today.

Dr. Heald spoke at a luncheon meeting of the annual industrial engineering conference of the Chicago section of the Society for the Advancement of Management, meeting on the Illinois Tech campus.

"The drop in engineering enrollment in the nation's colleges will be little short of disastrous to the industrial production we must maintain to support both our civilian economy and our military effort," he said.

He urged industrial leaders to recognize that the supply of engineers will be inadequate for the next few years and to take steps immediately to improve the competence of their engineers at all levels.

"Industrial management should encourage and support, verbally and financially, enrollment in formal evening classes and in-service training programs," he said.

It shouldn't be necessary to rely on federal aid to education or to wait upon congress to start ESMWT (engineering, science, and management war training) programs.

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"Private individuals and firms should do the job now and not wait on the federal government," he said.

A preliminary survey of freshman engineering enrollment this fall indicates 27 per cent less students than a year ago and 20 per cent less than in 1940. Enrollment of other types of students is down only about 10 per cent this year, he pointed out.

"If proposed draft procedures are invoked, engineering graduates in 1954 will total less than 7,000. We can't maintain ouselves adequately with less than 25,000 engineering graduates a year, and this figure will not be reached in 1952 or 1953."

All of last spring's 45,000 engineering graduates were readily absorbed into the economy, he said, and so were 1949's graduating total of 35,000.

"Although the fact is apparently not being recognized in Washington, the nation's economy and security are imperiled by the lack of a program which will insure a continuing supply of engineers.

"Our alternative is additional training for those already practicing the engineering profession and more effective use of engineering and technical talent by management," Dr. Heald said.

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END ADVANCE FOR RELEASE AFTER 12 NOON (CST) THURSDAY, OCTOBER 12, 1950

from
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Mailed: October 12, 1950
FOR RELEASE: Immediate

CHICAGO -- Eight authorities on the effects and control of noise will speak at the first National Noise Abatement Symposium October 20 at Armour Research Foundation of Illinois Institute of Technology.

Discussing the effects of noise will be Dr. Hallowell Davis, director of research, Central Institute for the Deaf, St. Louis, Mo., and Douglas E. Wheeler, field representative of the American Academy of Ophthalmology and Otolaryngology, Los Angeles, Calif.

Dr. Davis will talk on "The Effect of Noise on Hearing, Morale, and Efficiency," and Wheeler will discuss "Noise Abatement in Connection with Hearing."

A Talk on "The Measurement of Noise" by Leo L. Beranek, technical director of the acoustics laboratory, Massachusetts Institute of Technology, Cambridge, Mass., will conclude the morning session of the symposium.

Luncheon speaker will be Dr. James H. Sterner, associate medical director of the Eastman Kodak Company, Rochester, N. Y., who will ask "Are We Ready for Standards in Noise?"

Four papers on how to control noise will be heard at the afternoon session:

"Control of Noise in Mechanical Equipment" by Howard C. Hardy, supervisor of acoustics and vibrations research at Armour Research Foundation in Chicago.

"Control of Noise in Buildings by Air Conditioning" by C. M. Ashley, chief development engineer, Carrier Corp., Syracuse, N. Y.

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"Control of Noise in Buildings" by Cyril M. Harris, Bell Telephone Laboratories, Murray Hill, N. J.

"Control of Noise by Education and Legislation" by C. D. Yaffe, chief, field section, Federal Security Agency, Public Health Service, Cincinnati, Ohio.

Joint sponsors of the symposium are the Research Foundation and the National Noise Abatement Council. About 300 persons are expected to attend.

The meeting will follow a Shock and Vibration Symposium October 18 and 19, also on the Illinois Tech campus, conducted by the Office of Naval Research for the Research and Development Board.

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Mailed: October 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Harry S. Temple, 48, assistant manager of the credit department at the Northern Trust Company of Chicago, has been named comptroller of Illinois Institute of Technology.

Announcement of the appointment was made today by Raymond J. Spaeth, vice president for business affairs and treasurer of the Institute.

Mr. Temple replaces William J. Kearney, who resigned to accept a position as comptroller of the South Center Department Store,

A native of St. Paul, Minn., and a graduate of Dartmouth college, Mr. Temple is a certified public accountant. He has been with the Northern Trust Company since 1944.

From 1941 to 1944, he was comptroller of the Munising Wood Products company, Marquette, Michigan. From 1935 to 1941, he was comptroller of the Doughboy Mills, Inc., New Richmond, Wis.

Mr. Temple has been a part-time instructor for five years at the American Institute of Banking. He is a member of the Episcopalian church at Highland Park, Ill.

Mr. and Mrs. Temple and their three children live at 280 Laurel avenue, Highland Park.

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Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: October 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Raymond A. Wilke, 24, of 4710 North Spaulding avenue, has been elected president of the Institute's chapter of the American Society of Civil Engineers for 1950-51. He graduated from Steinmetz high school in September of 1944.

-mwr-

ILLINOIS INSTITUTE OF TECHNOLOGY
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CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: October 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Two southwest side seniors at Illinois Institute of Technology have been elected officers of the Institute's chapter of the American Society of Civil Engineers.

Richard E. Pages, 7125 South Artesian avenue, was elected vice president and Walter J. Zapfel, 2036 West 68th street, treasurer.

-mwm-

from...

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Public Relations Department
James W. Armsey, Director

Mailed: October 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Earl C. Kubicek, director of alumni relations at Illinois Institute of Technology, Chicago, will address members of the Institute's Fort Wayne alumni chapter following a 6:30 dinner October 19 at the Fort Wayne Chamber of Commerce building.

He will discuss Illinois Tech's 110-acre building program on Chicago's near south side.

The newly formed Fort Wayne chapter was organized by Louis P. Allaire, 2201 Sherman avenue, partner in the insurance firm of O'Rourke and Company.

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October 16, 1950
Mailed:
FOR RELEASE: Immediate

CHICAGO -- More than 600 engineers and hydraulics specialists are expected to attend the sixth annual National Conference on Industrial Hydraulics October 18 and 19 at the Sherman Hotel.

Twenty papers on the latest developments in 11 phases of hydraulics will be given. Topical reports will be presented in aeronautical, chemical engineering, civil engineering, agricultural, and refinery hydraulics, and centrifugal pumps, hydraulic presses, hose and fittings, and control of surges.

Principle speakers, exclusive of the technical papers, will be John Sanger, member of the Hoover Commission and vice president of U.S. Gypsum Company, Dr. Haldon A. Leedy, director of Armour Research Foundation of Illinois Institute of Technology, and Raymond D. Meade, former director of the Korea Technical Institute.

Mr. Sanger will address the October 18 dinner meeting on "The Findings of the Hoover Commission and What You Can Do About Them." Dr. Leedy will speak at the October 18 luncheon meeting on "Industrial Research in Latin America." Meade will talk on "Observations in Korea" at the October 19 luncheon meeting.

Conference director is Otto J. Maha, president of the Hannifin Corporation. Frank W. Edwards, director of civil engineering at Illinois Tech, is conference secretary.

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Mailed: October 16, 1950
FOR RELEASE: Immediate

CHICAGO -- Walter C. Troy, 34, has been named assistant chairman of the metals research department at Armour Research Foundation of Illinois Institute of Technology.

Troy's appointment was announced today by Dr. Carl E. Swartz, chairman of the Foundation's metals department.

In his new position, Troy will concentrate on special administrative problems and will be technical assistant to Dr. Swartz. He will also remain supervisor of heat treating and powder metallurgy research.

Troy received his bachelor's degree from the University of Notre Dame in 1933 and later attended Carnegie Institute of Technology. He spent nine years with Westinghouse Electric Corporation before joining the Foundation in 1947..

A member of the American Society of Metals and the American Institute of Mining and Metallurgical Engineers, Troy is married and lives at 9720 South Millard avenue, Evergreen Park, Ill.

-whk-

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Mailed: October 16, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Ellery H. Harvey and Milton E. Parker, of the department of food engineering at Illinois Institute of Technology, have been appointed to the board of editors for a book entitled "Food Packaging and Packing."

The book will contain approximately 25 articles from experts in the food packaging field and will cover various phases of the industrial and military aspects of packing and packaging.

Particular emphasis will be placed upon functional and physical characteristics, advantages, disadvantages, and limitations of various types of packaging methods and materials.

Published by the Reinhold Publishing corporation, N.Y., N.Y., "Food Packaging and Packing" is scheduled for release in the spring of 1951.

Among the contributors are:

Dr. Kenneth W. Brighton, research laboratories of the American Can Co., Maywood.

Charles J. Zusi, Container and Laboratories, Inc., Chicago.

John M. Jackson, Research laboratory, Continental Can Co.

John B. Donini, Product Development department, Marathon Corp., Menasha, Wisconsin.

Dr. G. J. des Autels, research director of Kalamazoo Paper Co., Kalamazoo, Michigan.

C. Berger Graves, Sefton Fibre Can Co., St. Louis, Mo.

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Roger V. Wilson, customers research division, Continental Can Co., Chicago.

Harry A. Sayer, Set Up Box association, St. Louis, Mo.

George Huffman, PurePak Division, ExCello Corp., Detroit.

Dr. William H. Aiken, research director, Pliofilm Division, Goodyear Tire and Rubber Co., Akron, Ohio.

T. M. Hill, research department, Aluminum Corp. of America, Pittsburgh.

F. S. Leinbach, director of research, Reigel Paper Corp., N.Y. City.

K. E. Prindle, vice president, The Dobeckman Co., Chicago,

Arthur H. Grace, Bemis Bag Co., St. Louis, Mo.

George Traver, vice president, Traver Corp., Chicago.

B. F. Kells, Container Corp. of America, Chicago.

Neil Fowler, General Box Co., Chicago.

F. P. Hankerson, executive secretary, Associated Cooperage Industries of America, Inc., Washington, D.C.

C. E. Fawkes, Pryoxlyn Products Co., Chicago.

Samuel Schuller, technical director, Paisley Products Inc., Chicago.

C. R. Cosby, secretary, Label Manufacturers National association, Washington, D.C.

W. J. Mutschler, Packing laboratory, Continental Can Co.

-mwm-

from
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Mailed: October 17, 1950
FOR RELEASE: Immediate

CHICAGO -- George H. Williamson, founder and chairman of the board of Williamson Candy company, will speak at a noon luncheon Thursday, October 19 before alumni of Illinois Institute of Technology in the Club room of the Art Institute of Chicago.

He will discuss "The Story of Oh Henry! -- How a Five Cent Candy Bar Became a Business."

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Mailed: October 17, 1950

FOR RELEASE: Immediate

CHICAGO -- Dr. Roland A. Budenholzer, 5432 Kimbark avenue, has been elected chairman of the Faculty Council at Illinois Institute of Technology for 1950-51. Budenholzer is a professor of mechanical engineering.

The Faculty Council consists of 12 Illinois Tech staff members who have been elected by vote of the entire faculty. They serve as a governing body for the Institute's Faculty Club.

Others elected were:

Henry C. Spencer, 10824 South Washtenaw avenue, professor and director of the department of technical drawing, as vice chairman; and Dr. Morton A. Countryman 730 Redwood Lane, Glenview, associate professor of physics, as secretary.

Budenholzer is past president of the Illinois Tech chapter of Sigma Xi, scientific research organization, and director of the annual Midwest Power Conference. An expert in thermodynamics and the heat pump, he joined the Illinois Tech faculty in 1940.

Spencer is author of a dozen text books and numberous articles on technical drawing and heads the only degree-granting technical drawing department in the country. He is a member of the executive committee and engineering drawing division of the Society for the Promotion of Engineering Education. Prior to his joining the Illinois Tech staff in 1941, he taught at Texas A & M college.

Countryman is a member of the American Association of Physics Teachers, American Physical Society, American Association of University Professors, Optical Society of America, and Sigma Xi, scientific research organization.

-mtm-

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Mailed: October 17, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 2:30 P.M. (CST), FRIDAY, OCTOBER 20, 1950

CHICAGO -- Acoustical detectives are using noise circuits similar to electrical circuits to track down the sources of machinery noise, an expert who tells industry how to build quieter equipment said today.

Dr. Howard C. Hardy, supervisor of acoustics and vibrations at Armour Research Foundation of Illinois Institute of Technology, descibed the noise circuits which trace the paths of sound energy in a machine.

He addressed the National Noise Abatement Symposium on the Illinois Tech campus on "Control of Noise in Mechanical Equipment."

"Just as in a violin," Dr. Hardy explained, "the source of sound is the slipping action of the bow on the string, but the radiating surface is the body of the violin. The noise engineer must be careful to distinguish between the source of sound energy and the sources of radiated sound."

Once noise engineers have made diagrams of all noise energy paths in a machine, they can reduce the sources of sound or disconnect the circuit at some point.

Dr. Hardy called the breaking of a noise circuit "de-coupling." He cited the spring mountings used on car engines: the engine shakes, but not the car itself.

"There is just as much energy, but less noise," he explained.

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"Sometimes an experienced research worker in noise reduction can quickly recognize the gremlins which cause the trouble," Dr. Hardy said. "More often, however, noise reduction comes about by careful scientific analysis, good measurements, and keen engineering insight by a team of experienced workers."

Finding the original sound source in a machine is often complicated by the fact that there are secondary sources between the energy source and the radiating surface, he added. The noises follow devious paths, all requiring careful analysis.

"By making schematic diagrams on which are plotted the paths that noise energy takes between its source and radiation point, the relative influence of each path can be evaluated and the simplest and most inexpensive method determined to produce results," the speaker concluded.

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END ADVANCE FOR RELEASE AFTER 2:30 P.M. (CST), FRIDAY, OCTOBER 20, 1950

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Mailed: October 17, 1950

FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 1:30 P.M., THURSDAY, OCTOBER 19, 1950

CHICAGO -- Raymond D. Meade, former director of the Korea Technical Institute, today urged the United States to help convert European "have-not" nations into free, sovereign states, instead of playing fireman to recurring blazes of revolt.

Meade, associate professor of education at Illinois Institute of Technology, spoke at a luncheon meeting of the national hydraulics conference in the Sherman hotel.

Established by the ECA for operation by Illinois Tech, the ill-fated Korea Technical Institute disbanded after the fall of Seoul.

"The United States," Meade advised, "should employ a little foresight by clearing European and Asiatic fire hazards of poverty and politcal unrest before they ignite and burst into flame."

He suggested four ways to stabilize "have-not" countries:

1. Send American experts to smooth out technical and economic difficulties.
2. Use counter-propaganda such as the Voice of America and capable spokesmen.
3. Give financial aid.
4. Establish educational missions.

Meade accused Russia of inciting the Korean war as the first in a series of revolutions aimed at crippling American economy. "Russia's threat on American

-more-

economy has just begun. Korea is merely the first straw in the haystack of revolution. The next is obviously Indo-China while the Philippines, Burma, and Iran are growning danger spots."

We have dispatched large numbers of men and have invested huge sums of money to aid in the Korean defense of democracy. And this is a comparatively small contribution in the light of what Russia undoubtedly is plotting for our future, he said.

Meade said Russia is conducting an ideological and psychological warfare to disrupt American management and labor and, through internal turmoil, throw one at the throat of the other.

"Already the Korean episode has taken toll on our economy by limiting housing through the barrier of 'more money down' and by restrictions on credit buying.

"Korea is a fertile field for scientific and industrial exploration. American experts are needed to organize, develop, and establish industries, and to administer productive enterprises. In every way," he emphasized, "Korea should be encouraged to become self sufficient."

But before that job can be done, the United Nations must spend several months, following cessation of hostilities, in emergency relief work and rehabilitation of the ruined republic.

"The Korean war should convince us to take the offensive and assist the 'have-nots' before we are forced to their defense."

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END ADVANCE FOR RELEASE AFTER 1:30 P.M., THURSDAY, OCTOBER 19, 1950

from...
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Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed:
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 7:30 P.M., FRIDAY, OCTOBER 20, 1950

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Meade, associate professor of education at Illinois Institute of Technology, spoke during a dinner meeting of the Southern division of the Illinois Manufacturers' association at the Broadview hotel, East St. Louis.

Established by the ECA for operation by Illinois Tech, the ill-fated Korea Technical Institute disbanded after the fall of Seoul.

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Mailed: October 17, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 1:00 P.M. (CST) WEDNESDAY, OCTOBER 18, 1950

CHICAGO -- President Truman's Point Four program is delaying the technical development of Latin American countries, a research director charged today.

"Many countries who are arranging with private organizations for such help and who are willing to pay for such services out of their own funds, are now waiting to see if they cannot obtain technical aid at no cost," Dr. Haldon A. Leedy, director of Armour Research Foundation of Illinois Institute of Technology, declared.

Dr. Leedy addressed the National Conference on Industrial Hydraulics at the Sherman hotel.

"Although I am sure that technical aid and engineering know-how cannot and will not be given away, still the uncertainty introduced by Point Four has delayed a number of technical assistance programs in Latin America by several years," he said.

Dr. Leedy urged clarification of Point Four so that definite plans for technological development can be made by other countries.

"Latin America needs technical help," he emphasized," but, more important, Latin America needs to learn how to solve its own technological problems. In other words, it must learn the methods of industrial research."

During the past year Dr. Leedy visited many Latin American countries where he discussed the need for technical assistance with leaders of industry, commerce,

-more-

education, and government.

"Before any intelligent technical assistance program can be worked out, it is necessary to know the country," the speaker asserted. "It is necessary to study the country's state of development, its natural resources -- both agricultural and mineral, its agricultural methods, its industries, its fiscal policies, and other factors."

"Such a survey is called a 'technological audit'. Armour Research Foundation has carried on technical assistance programs in Latin America for nine years, and has performed such surveys in Argentina, Mexico, and El Salvador, and is currently assisting on a program in Cuba."

Dr. Leedy added that recommendations resulting from an audit must be implemented through engineering services by foreign engineers, training of engineering personnel within the country, development of new products and processes and the establishment of research and development laboratories within the country.

"The need for technology in Latin America is apparent," he said. "Only 1/20 the amount of mechanical energy per person is consumed there as is consumed in the United States. There is a real need for a clear cut policy toward technical assistance for these countries."

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END ADVANCE FOR RELEASE AFTER 1:00 P.M. (CST) WEDNESDAY, OCTOBER 18, 1950

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Mailed: October 17, 1950

FOR RELEASE: Immediate

Note to Editors:

Here is a reprint of an article titled "Scientists Should Sell Science," from the latest issue of *Frontier*, a scientific quarterly published by Armour Research Foundation of Illinois Institute of Technology.

You are free, of course, to use it in any way you wish.

-- Jim Armsey

from

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Mailed: October 17, 1950
FOR RELEASE: Advance

National Noise Abatement Symposium, October 20, 1950, Sponsored by Armour Research Foundation of Illinois Institute of Technology and the National Noise Abatement Council.

Abstract of an Address, "Control of Noise in Mechanical Equipment," by Howard C. Hardy, Supervisor of Acoustics and Vibrations Research, Armour Research Foundation.

FOR RELEASE AFTER 2:30 P. M. (CST) FRIDAY, OCTOBER 20, 1950

Machines are not "naturally noisy." Because of the intense efforts of machine designers and mechanical and electrical engineers to get more horsepower per pound, very little effort has been spent in eliminating noise. When research time is spent on quieting, good results are obtained as, for instance, in the interior of automobiles and airplanes and in most home appliances. Compare also the new streetcars with the old ones. The magnitude and complexity of many machine noises are still so great, however, that it is difficult for an acoustical engineer to reproduce them artificially in the laboratory.

Sometimes an experienced research worker in noise reduction can quickly recognize the gremlins which cause the trouble. More often, however, noise reduction comes about by careful scientific analysis, good measurements, and keen engineering insight by a team of experienced workers. Of great importance is the analysis of the problem.

The noise engineer must be careful to distinguish between the source of sound energy and the sources of radiated sound. For example, the impact of a valve may be propagated through a machine and radiated

from many surfaces. Just as in the violin, the source of sound is the slipping action of the bow on the violin string, but the radiating surface is the body of the violin. Often there are secondary sources which are between the energy source and the radiating surface.

There are four chief ways of reducing noise in mechanical equipment:

1. Lessen the force from the sound energy source
2. Reduce the mechanical coupling between the energy source and secondary sources and finally from radiation sources.
3. Increase the mechanical impedance of the moving parts.
4. Decrease the radiation from the radiating surfaces.

Many engineers overlook one or more of these methods in a cursory examination of a noise problem.

The Acoustics and Vibrations staff of the Armour Research Foundation has developed a technique of analyzing noise problems by making schematic diagrams on which are plotted the paths that the noise energy takes between its source and radiation point. By this scheme the relative influence of each path can be evaluated and the simplest and most inexpensive method determined to produce results. Many false starts are also eliminated by this analysis.

The success of the listed approaches to noise problems in machinery is so great that it can be said that there is hardly a noise problem that cannot be ameliorated by scientific research.

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Mailed: October 17, 1950
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National Noise Abatement Symposium, October 20, 1950, Sponsored by Armour Research Foundation of Illinois Institute of Technology and the National Noise Abatement Council.

Abstract of an Address, "Are We Ready for Standards in Noise?" by James H. Sterner, Associate Medical Director of the Eastman Kodak Company and Chairman of the Committee on Physical Agents of a Hazardous Nature of the Council of Industrial Health of the American Medical Association.

FOR RELEASE AFTER 1:00 P. M. (CST) FRIDAY, OCTOBER 20, 1950

That noise, at certain high levels of intensity presently existing in industry, can and does cause deafness must be accepted. The situation will become more serious, for the generation of noise by industry's tools seems to increase in proportion to their technological improvement. Serious impairment of hearing for an increasing number of our working force can be prevented only by an active and concerted attack on this complicated and difficult problem.

A good beginning in the study of the effects of noise on hearing has been made, but there are tremendous gaps in our understanding of the fundamental relationships between noise and deafness and there is much to be learned in the methods of preventing or controlling excessive noise. Of equal importance, since there is evidence that injurious effects may be presently occurring unrecognized by many who could and would make an effort to prevent them, is the awakening of a recognition that the problem exists and is serious.

There is a real need for standards defining levels of noise which are safe, healthful, and consistent with a good productive performance. The implication here is not that a certain degree of noise

is necessary for well being (although this may be so), but that there is a range of exposure to noise which is compatible with the safety, health, and normal working capacity of the individual. The emphasis should be a positive one, - that of defining a good and acceptable environment. Admittedly, much information pertinent to the establishing of this sanitary zone will come from studies revealing injurious effects on hearing from excessive noise. However, the conditions will be established accurately and securely only when sufficient field and laboratory studies have been made relating normal hearing status with certain well-defined noise values.

To one familiar with the increasing practice of establishing exposure limits for other industrial hazardous agents - as, for example, harmful dusts and solvent vapors - the restraint shown thus far by investigators in the field of noise effects in suggesting maximum allowable exposure values is unusual, and it might be added, commendable. From the fact that standards for noise have not been developed in the face of a real need for such criteria - by an enlightened industry to assure a good working environment, by governmental enforcement agencies to stimulate compliance when necessary, we must conclude that our present knowledge is insufficient and inadequate.

What must be done before such standards - admittedly greatly needed - can be reasonably established? First, - the considerable amount of laboratory investigation being conducted by university, governmental, and industrial research units should be continued and expanded. Exchange of information among this group is usually good and the results of these studies, of great importance in suggesting the initial criteria for standards, are generally available within a reasonable time after completion of the investigations. The "proof of the pudding", however, can come only through extensive and well-

controlled field studies, and it is in this area that our present program is most inadequate. The American Academy of Ophthalmology and Otolaryngology, through the activities of its Subcommittee on Noise in Industry, is making an effective attack on this phase and it is hoped that other investigations, - representing a broad cross section of industrial conditions - will be reported to this committee for coordination and critical evaluation. From such a program, effectively prosecuted, can come the information needed to establish the hygienic standards for noise in industry.

Drawing from our experience with development of standards for other hazardous industrial agents, we can postulate some of the difficulties which will be encountered in establishing a standard or standards for noise. We are already in the initial stage, where a few intrepid souls have dared to suggest limiting values for intensity of noise. These are based upon studies showing some evidence of injury at a particular level of exposure, - with the proposed "limit", of course, somewhat below the injury level. Even though most authorities might agree as to the evidence supporting the injury level, the argument will certainly be joined when the size of the safety factor to be applied in extrapolating to the "safe" level is proposed.

A second point of contention will develop when criteria other than permanent irreversible physical injury are offered for consideration. The importance of transient and reversible injury, and particularly of the psychic factors such as discomfort, fatigue, and emotional disturbance, is extremely difficult to evaluate. The relative significance of these latter characteristics is apt to provoke an endless dispute.

It should be pointed out that once a suggested standard appears in the literature it is apt to gain a stature by frequent repetition,

however uncritical, that is quite unwarranted and frequently out of all proportion to that originally intended. The initial qualifications and reservations are lost along the sometimes devious pathway, and a value suggested as a working limit or a trial balloon may emerge as an authoritative and well-established "standard". Incorporation in an official industrial hygiene code will certainly bestow an aura of respectability, even though the value has very dubious antecedents.

The development of standards is not, of course, the final objective in the program. Without reliable criteria, however, the control of the hazard is likely to be arbitrary and capricious. When we can define in terms of noise the safe, healthful, and productively efficient environment, then control, though sometimes technically and economically difficult, can be achieved on a sound and sensible basis.

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National Noise Abatement Symposium, October 20, 1950, Sponsored by Armour Research Foundation of Illinois Institute of Technology and the National Noise Abatement Council.

Text of an Address, "Control of Noise in Buildings by Air Conditioning," by C. M. Ashley, Chief Development Engineer, Carrier Corporation, Syracuse, New York.

FOR RELEASE AFTER 3:30 P. M. (CST) FRIDAY, OCTOBER 20, 1950

Noise from outside the building and from adjacent spaces may be the principal components of the noise in buildings. Obviously, therefore, effective control of noise in buildings depends upon the exclusion of outside noise. Since thousands of times as much airborne noise can pass through an opening as through the same area of wall, openings such as windows and doors must be closed if outside noises are to be excluded effectively. Thus, natural means of ventilation and cooling which require the opening of windows are incompatible with noise control in buildings. It follows logically that the air conditioning of the occupied building spaces is a necessary part of such noise control. Since air conditioning is normally accomplished by mechanical means involving fans, motors, refrigerant compressors, pumps and the like and since the conditioned air customarily passes into the room from the outside, the air conditioning of the space may create new noise problems in eliminating the noise entering the room through open windows and doors.

NOISE FROM AIR CONDITIONING EQUIPMENT VS. ROOM NOISE LEVELS

Room noise levels vary through extremely wide limits depending upon the type of occupancy and the individual characteristics of each

room from that of a sound studio on the low level end to a boiler shop on the high. Also, different types of air conditioning equipment produce radically different room noise levels. An air conditioning installation, in order to be successful from the noise standpoint, must use the proper selection of equipment and design of the system so as to maintain the room noise level due to the equipment in proper relation to the room noise level due to other causes. Figure #1 gives the normally expected room noise levels for different room uses or classes of occupancy on the one hand and the approximate room noise level due to the operation of different types of air conditioning equipment on the other hand. The data of Figure #1 have been assembled from a variety of published and private sources.[1,2,3]

The expected room noise level is intended to include noises both from inside and outside of the room which are characteristic of the normal room occupancy with the windows and doors closed but without air conditioning. It can be considered as the background level with normal occupancy but does not include relatively intermittent peaks of noise. For instance, in a small quiet room the extra noise due to talking and walking are not included but they are in a large room occupied by many people where such noise would be relatively continuous. The noise levels shown are appreciably lower in many cases than can be expected in noisy surroundings with the windows open, and are thus suitable for use only with air conditioning. The range of noise levels for each type of use are to account for differences in location, amount of room sound treatment and individual variation between occupied spaces.

The room noise level resulting from the operation of the air conditioning equipment is not taken directly at the equipment or at the air openings into the room. Instead, it is for a characteristic

location for an occupant of the room and may be reasonably close to the noise source. For instance, for room air conditioners, the standard observation point is 5 feet from the wall directly in front of the unit and at a height of 4 feet from the floor. The range of room noise level due to the air conditioning equipment is the result of differences between different air conditioning systems within the same class, variations of concentrations of the equipment or supply at a given location in the room and the differences in the acoustical characteristics of the room. This noise level is determined by correcting the room noise level with the equipment in operation for the effect of the noise level without the equipment in operation.

Figure #1 indicates that the noise levels of very exacting types of occupancy can be reached only with a limited range of types of air conditioning systems or stated in another way, where there is an exacting requirement as to room noise level, the air concitioning must be designed to correspondingly exacting standards.

It has been found that if the room noise level due to the air conditioning equipment alone is no greater than the noise level without the air conditioning equipment running, the result will usually be satisfactory and the room noise level will be benefited substantially by the air conditioning as a result of the ability to close windows. Where the air conditioning and other room noise levels are equal, the noise level will rise 3 db when the air conditioning equipment is turned on. There are, however, several important modifications of this rule which should receive consideration.

There are special problems involved in the air conditioning of movie sound stages and broadcasting studios. Here severe requirements are imposed by the need for high fidelity reproduction of the sound and in certain cases have resulted in specification of a room sound

level of 20 db above a frequency of 300 cycles per second and 30 db at lower frequencies. These sound levels are based upon a flat, not a weighed network. The problem of reaching this room level from an original equipment level of 90 to 100 db presents a challenge to the air conditioning engineer which taxes his ingenuity but which has been successfully surmounted.

In very quiet homes and offices, it is usually not practical to provide air conditioning equipment which will match the background noise level of the space. For instance, even though the background level of a home may be as low as 25 db., air conditioning apparatus producing a room noise level of 40 db or more is normally quite acceptable. Such a noise level is still low enough so that there is little interference with the intelligibility of speech. In such a situation, the character of the combined noise will be determined by that of the apparatus noise, therefore, the quality of this noise becomes all important.

Discontinuity or variation of noise with respect to time or space is particularly annoying. The time discontinuity is sometimes observed as a periodic variation of noise intensity in the form of beats which result from the interaction of exciting forces of different frequencies as, for instance, the combination of the noise due to the rotation of an electric motor with that due to the electrical hum of the same motor or the variation of noise which may result from the different rotational speeds of imperfect belts and pulleys. Variation of noise intensity with space can be caused by standing waves from the reflection of single frequency sound such as may result from the electrical hum of a motor. Equipment noise to be of good quality should be broadly distributed as to frequency and continuous as to time. Where the room noise, resulting from the air conditioning equip-

ment, is of good quality, it is obvious that a much higher relative noise level due to the air conditioning can be tolerated than where the quality is poor. Air conditioning apparatus noise of good quality may also have positive value as a means of masking other noises which are less desirable in quality. This is particularly true for hotel rooms and offices in noisy locations.

In rooms having characteristic noise levels high enough to interfere with the intelligibility of speech, it is generally not sufficient to design the air conditioning system to produce an equal room noise. In such a case, it is desirable to maintain the component of the total room noise level which is due to the air conditioning 5 db below the room noise level without the air conditioning in operation.

PROBLEMS OF NOISE CONTROL IN AIR CONDITIONING EQUIPMENT

Air conditioning systems can be divided into classes depending upon the degree to which the equipment is located remote from or in the room to be conditioned. On the one extreme is the central station air conditioning system supplying individual rooms with conditioned air through a duct system and on the other is a self-contained room air conditioning unit in which substantially all of the air conditioning functions are provided by equipment located within the conditioned space. Intermediate between the central station and the room air conditioners as to function and noise level, are two other types frequently used for multi-room air conditioning. One of these is the fan-coil system in which the refrigeration is located remotely and the cooling system and air circulating are accomplished by equipment located in the conditioned spaces. The other is the induction type of air conditioning system in which a part of the heating and cooling is done in the conditioned spaces but the air is circulated in the

room by jet action without the use of mechanical means. Each type of system provides a different balance of performance and cost and each type of system will produce satisfactory results when properly applied to the uses for which it is particularly suited. In order to know that the air conditioning equipment is properly adapted for the job, it is desirable to understand some of the noise problems which are involved in the application of air conditioning.

CENTRAL STATION SYSTEMS

I shall first discuss problems involved in the central station type of installation. In such an installation, air to be conditioned is drawn through a duct system from the outside, and from the conditioned spaces to an air conditioning unit consisting of filters, spray or coil and fan, usually motor driven. The noise level at the inlet and discharge of the fan is characteristically of the order of 70 to 100 db depending largely upon the static pressure across the fan as determined by the size of the system and the character of the system design. Airborne noise from the apparatus is transmitted to the room through the ducts. There is a certain amount of natural attenuation in duct systems. Most of this attenuation is in the form of reflections set up by elbows and branch fittings which rather fortunately, are most effective for low frequency sound and for small sizes of ducts. As a result of this reflection effect, systems where there are a series of branch take offs or outlets in a run have a higher noise level at the first outlets and a much lower level in the later outlets in the run. In addition, there is a substantial drop in noise level from the air conditioning outlet or return openings in the room to the room noise level at a reasonable distance from the outlet or return. This difference is usually of the order of 10 to 25 db. Because of this natural attenuation from fan to room, it is

possible to install air conditioning systems which are entirely satisfactory in the less exacting applications without the use of any special sound treatment. Where a moderate amount of additional sound attenuation through the duct system is required, this or ordinarily accomplished by the introduction of a duct lining of acoustically absorbent material or the use of sound absorber cells in the duct system near the air conditioning apparatus. It is possible by this means to obtain additional attenuation of 10 db with ease. Due to the fact that most sound absorbent materials are more effective for high frequencies than for low, the high frequency components of the equipment noise tend to be removed first, leaving a larger percentage of the more difficult low frequency components of the noise to be absorbed by successive elements of the sound absorbent material. Thus the successive elements of the sound abosrber become less and less effective. A reduction of the noise level of as much as 20 or 30 db requires a much larger amount of sound absorbent material than would be proportional to that necessary for the absorption of 10 db. Where extremely low room noise levels must be maintained such as for sound stages and broadcasting studios, it is sometimes necessary to resobt to additional expedients beyond the normally employed sound absorber sections. One of the most effective of these means is the use of a sound absorbing plenum on the inlet and discharge of the air conditioning equipment.

The noise which is regenerated on the room side of the sound absorber by the air motion through the ducts and grilles is usually of a low enough intensity to be unimportant in the overall noise due to the apparatus. However, where the room level requirement is extremely low or the duct and grille velocities are high these regenerated sources of noise must be considered and suitable velocities and

types of grilles selected to meet the job requirements.[4]

In addition to the noise which is transmitted through the duct system, noise may be transmitted through the building structure or through pipes and ducts. Also, airborne noise originating in the apparatus room may be transmitted through the boundary walls to adjacent spaces. In order to prevent such transmission, it is customary to select dynamic elements of the equipment such as motors, pumps, refrigerant compressors, etc. with due consideration of their noise generating characteristics and to provide these with suitable isolation from the building structure and from pipe and duct connections. In addition, the apparatus room is usually acoustically treated to reduce the noise level in the room, particularly, when it is adjacent to conditioned spaces. In spite of these precautions, the noise transmitted from the apparatus room may be a limiting factor in determining the location of this room with respect to the conditioned space. This presents a particular problem in multi-story buildings where it may be desirable to locate the apparatus space on an intermediate floor and thus minimize the length of run of ducts and piping. In some cases, it has been possible to accomplish this result by unusual care in the design of the apparatus room which may even necessitate a local modification of the building structure. Fortunately, there are now available heat-operated and high speed mechanical types of refrigeration which present less difficulty in sound isolation than the older slower speed refrigerating machines and which are particularly well suited to conditioning of large buildings.

A special problem associated with central station air conditioning systems is due to the "cross talk" which may arise from the connection of different rooms by means of the same supply or return duct systems or the use of return air grilles or openings to the

corridor. It is not usually necessary to sound treat the ducts of a multi-room air conditioning system directly adjacent to the rooms since the duct sizes are usually small and the noise transmitted from the air conditioning system tends to mask speech noises. However, where the room noise level is very low, or the noise level requirement is extremely exacting, or where there are high intensity noises in adjacent spaces, local acoustical treatment may be required. This is more apt to be true with respect to direct openings between an office and the corridor.

Considerable research has been carried on in the field of equipment noise generation and in noise level attenuation through duct systems.[4,5,6,7,8] There has been developed a method of estimating the room noise level due to air conditioning equipment which parallels the method of estimating the heat losses and heat gains to the room and which permits the air conditioning engineer to estimate the room noise level in much the same way in which he estimates the room cooling and heating load.[9,10] This "energy" method starts with the noise energy emitted by the equipment, traces its attenuation through the system, and determines the room noise level from the noise energy entering the room and the sound absorptive capacity of the room. Unfortunately, there is no accepted standard method for predicting the noise level at the fan inlet and discharge and the design of a a typical air conditioning system with respect to noise is still based primarily on the experience of the individual designer and on "rule of thumb" procedures.

SELF-CONTAINED EQUIPMENT

Where the entire air conditioning function is carried on by apparatus located in the conditioned space as with room air conditioning units and the larger self-contained units used for retail stores,

restaurants, and the like, the success of the noise control depends upon the quality of the design and manufacture of the equipment and the suitability for the particular application in which it is located. Where the application has a relatively high background noise level as with a tavern or a drug store, the problem of satisfactory noise design of the equipment is simple. This is not equally true for applications whose background noise level is low, such as the bedroom of a house located in the country or a high-grade dress shop. The problem of achieving a low room noise level with such equipment is greatly complicated by the presence of all the operating parts of the system in the conditioned space and by limitations of size and cost of the equipment. Despite these limitations, air conditioning designers and manufacturers have made great progress over the past years in developing satisfactory unitary room air conditioning equipment and have achieved a marked degree of success in satisfying the requirements of many of the more exacting applications. Since in such applications the noise level of the air conditioning equipment may be substantially above that of the other background noise, the need for a high quality of noise is paramount. In spite of progrees, it is unreasonable to expect this type of equipment to meet the most exacting noise requirements.

FAN-COIL UNITS

A variety of air conditioning systems are available, particularly for multi-room installations, in which the refrigeration equipment is located remotely and hot or cold water is pumped to a coil located in or adjacent to the space together with a motor-driven fan for circulating the air. This equipment has some of the problems which are intrinsic in the self-contained and room air conditioning units in which the fan noise is usually predominant, thus it is unreasonable

to expect as low a noise level from such a system as can be achieved with a high-grade central station system.

INDUCTION UNIT

Air conditioning systems are available for multi-room installations in which air is supplied from a central source to local induction units which recirculate room air by ejector action over heating and/or cooling coils. In this class of equipment, the room noise level due to the air conditioning is dependent upon the amount of regenerative noise in the duct system and ejector nozzles. By suitable design of these elements, it is possible to produce a room noise level which is generally considered acceptable for even sound-treated private offices as well as for apartments, hotels, hospitals and other multi-room applications.

CONCLUSION

Air conditioning can serve as an indispensable element in the control of noise in buildings by making it possible to close windows and doors and by masking noise of poor quality with equipment noise of good quality. Air conditioning equipment can be designed to meet any noise level requirement but there is a wide variation in the types and individual systems which are available commercially just as there is a wide variation of noise level between different uses of rooms and between individual rooms. The problem of the air conditioning engineer is to match the design of the air conditioning system to the noise level needs of the space. Much progress has been made in this direction in the last few years.

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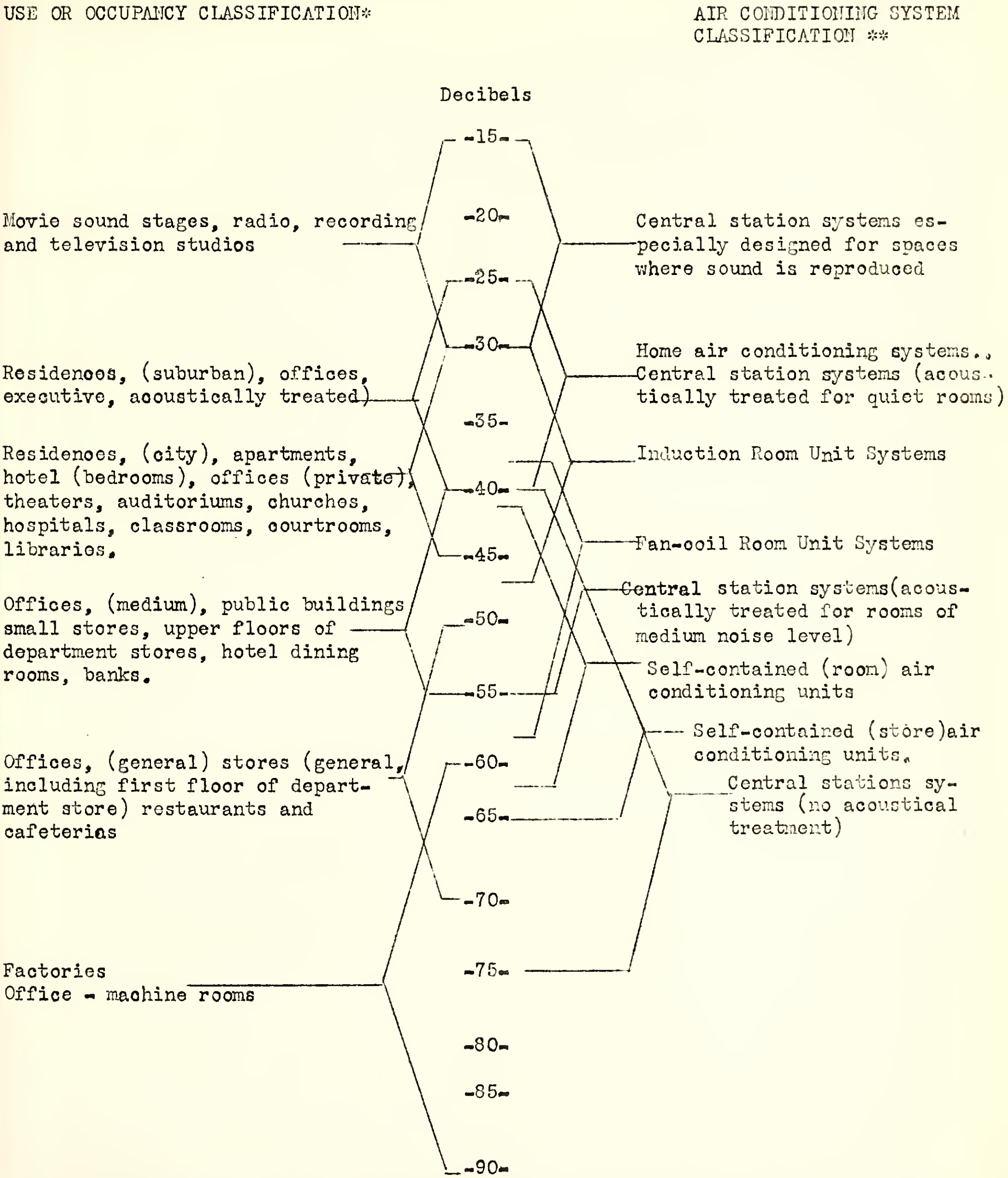
EXPECTED ROOM NOISE LEVEL RANGE

(Weighted for Ear Response)



*The room noise levels given include the normal background noises due to occupancy and location with windows and doors closed but do not include short intermittent peaks or air conditioning equipment noises.

**Room noise level due to the operation of the air conditioning equipment.

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Abstract of an Address, "Noise Abatement in Connection with Hearing," by Douglas E. Wheeler, Field Representative of the Sub-Committee on Noise in Industry, of the Committee on Conservation of Hearing, of the American Academy of Ophthalmology and Otolaryngology, Los Angeles, California.

FOR RELEASE AFTER 11:00 A. M. (CST) FRIDAY, OCTOBER 20, 1950.

Noise is known to be capable of producing decrement in auditory acuity, i.e. hearing loss. The level above which noise becomes traumatic is thought to be in the order of 90 db, but the length of exposure to a given level necessary to initiate damage is not yet determined; neither is the question of individual differences in susceptibility to noise-induced trauma. Studies are in progress which, it is hoped, will yield information on these points.

At least three methods of abatement are indicated. Reduction of the disturbance at its source, such as the quieting of excessively noisy operations or processes, would certainly be a primary method of attack. Since many industrial operations will not readily admit this approach, a second alternative would be segregation of such operations in such a manner as to expose only the personnel necessary to the job. A third method is the reduction of noise at the ear itself. This requires insertion of an occluding substance or plug in the ear canal, or covering the entire ear with a muff-like device, or combinations of plug and muff. The method introduces certain problems which call for better solutions.

In general, the method appropriate to any given industrial situation will be best determined by evaluation of the exposure variables peculiar to that situation, i.e., the level and duration of the prevailing noise, the energy distribution in the noise spectrum, and the number of personnel exposed.

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Abstract of an Address, "Control of Noise by Education and Legislation," by C. D. Yaffe, Chief, Field Section, Federal Security Agency, Public Health Service, Cincinnati, Ohio

FOR RELEASE AFTER 4:30 P. M. (CST) FRIDAY, OCTOBER 20, 1950

Efforts to control noise run into the fundamental principles involving the privileges of the individual and the rights of the community. There is a conflict between the right to make noise and the privilege of having peace and quiet. The positions of the individual and the community on this question are not consistent. For example, while the individual acting independently is not supposed to disturb the community with unnecessary noise, it is quite acceptable for thousands of people at a football game to disrupt the quiet of a large area for prolonged periods. The apartment dweller must not play his radio too loudly, but the politician's sound truck may roam the streets with impunity.

Laws are necessary in any effective noise control program, but it has been shown time and again that enforcement requires public support. Public backing cannot be obtained without education. Consequently, education and legislation must go hand in hand. Neither can be allowed to lag too far behind the other. If a law is passed before the public is ready to back it up, there is danger that authorities will let enforcement slide and valuable ground is lost as respect for the law disappears. On the other hand education must be carried

to its logical conclusion--legislation which insures execution of the public's wishes. Otherwise the lessons learned are soon forgotten.

Compensation has been awarded in a number of states where impaired hearing has resulted from noisy industrial processes. Even without the threat of such payment, industry is rapidly learning that elimination of unnecessary noise brings dividends in the form of increased productivity. Quieter working conditions lessen fatigue and reduce worker absenteeism. Through the efforts of industrial hygiene agencies industry has accepted the concept that noise exerts a harmful effect. This concept must now also be sold outside industry. The ordinary citizen must be made to realize that noise is important and that his well being depends upon its elimination.

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Text of an Address, "The Control of Noise in Buildings," by Cyril M. Harris, Member of the Technical Staff, Bell Telephone Laboratories, Murray Hill, N. J.

FOR RELEASE AFTER 4:00 P. M. (CST), FRIDAY, OCTOBER 20, 1950

This afternoon I am going to discuss the means by which noise is communicated in buildings and how it can be controlled. Quiet conditions in a building located in a noisy area usually don't just happen. But they may be attained by intelligent planning -- the planning of the building layout; the selection and careful installation of machinery and other potential noise sources; the proper design of wall, ceiling and floor structures; and the careful treatment of details which might otherwise completely short-circuit the noise-insulation of the building.

A question that should be answered in the early stages of planning is just how much sound insulation will be required. The answer to this question depends not only on the sources of noise that one is going to insulate against but also upon the degree of quiet that one wishes to attain.

Outdoor sources, people, and machinery are the three groups which are the principal contributors to the noise in buildings. Of these outside sources, traffic noise is usually the primary offender. It has been found that the noise in a typical office room increases directly with the number of people in it. In factories, on the othe

hand machinery noise is usually the predominant noise source. It is desirable that measurements be made of the level and spectrum of each of the sources of noise against which insulation is to be provided. Where this is not convenient or practical, one can make estimates based on the results of a number of comprehensive noise surveys which are available.

The question of what noise level is acceptable and what level to shoot for in the design of a building is somewhat arbitrary. The level of noise which will be acceptable depends not only on the use of the building and the character of the noise, but also one's individual tolerance to this noise. It is extremely useful from an engineering standpoint to have some established range of average noise levels that are acceptable under average conditions. Professor Vern O. Knudsen and I have made a study of this problem and have published the following table of recommended average noise levels in unoccupied rooms[1].

TABLE I*

RECOMMENDED ACCEPTABLE AVERAGE NOISE LEVELS IN UNOCCUPIED ROOMS

	Decibels
Radio, recording, and television studios	25-30
Music rooms	30-35
Legitimate theaters	30-35
Hospitals	35-40
Motion picture theaters, auditoriums	35-40
Churches	35-40
Classrooms, lecture rooms	35-40
Apartments, hotels, homes	35-45
Conference rooms, small offices	40-45
Court rooms	40-45
Private offices	40-45
Libraries	40-45
Large public offices, banks, stores, etc.	45-55
Restaurants	50-55

*The levels given in this table are "weighted"; that is, they are the levels measured with a standard sound-level meter incorporating a 40-db frequency-weighting network.

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[1] V. O. Knudsen and C. M. Harris, Acoustical Designing in Architecture, John Wiley and Sons, Inc., 1950, Page 221.

Later we shall see how this table may be employed in calculating the noise-insulation requirements for a building.

The means by which sound is communicated throughout a building can be classified in two categories: airborne transmission, and sounds which originate from mechanical vibration and direct impact. Since mechanical vibration is transmitted through continuous structures with relatively little attenuation, it is important that it be squelched at its source wherever practical. The noise that is communicated into a room from the outdoors or elsewhere in a building by a direct continuous path through the air often limits the total sound insulation that can be attained. For example, one such path might be a poorly designed ventilation duct which is a common air supply for two rooms. During the last World War, the Radiation Laboratory at M.I.T. held meetings in the largest assembly hall in the Institute to discuss their secret research. I recall that it was necessary to close one of the laboratories on the floor above during these meetings and post an armed guard outside it, because a ventilating duct which supplied both rooms also provided a possible means by which the secret discussions could have been overheard clearly. Even when the windows and doors in a room are closed, more noise is apt to be transmitted through cracks around the windows, doors, pipes and service outlets than through all the wall areas. Obviously then, if one desires a high degree of sound insulation for a room, all such sound-leaks must be plugged. Noise is transmitted through a so-called "rigid partition" such as concrete, or brick, primarily in the following way. When sound waves strike the partition, they force it into vibration. The more massive it is, the smaller will be its amplitude of motion. These vibrations constitute a secondary source of sound and radiate acoustical energy on the opposite side of the par-

tition. Many difficult problems that frequently arise in the control of noise in buildings can be obviated by careful and intelligent selection of the building site and the planning of the layout of the rooms and service facilities in the building. Thus by placing the rooms requiring the quietest conditions in sections of the building where the average noise level will be lowest, it is sometimes possible to avoid expensive methods of noise insulation. It is important that elevators, air conditioning equipment, motors and other noise-producing equipment be removed and isolated from sections that can least tolerate such noises. When planning a building, it is even important to give consideration to such details as the placement of windows and doors. If a group of rooms all have doors facing a common corridor, some advantage may be gained by staggering the positions of the doors. Since windows are usually the paths of least resistance in the over-all noise-insulation of a room, it is not advisable to place windows of adjacent rooms next to each other if moderate noise-insulation between rooms is required. I would like to cite one example to show how a consideration of noise conditions can be useful in the layout of a lecture room. Suppose the room is rectangular, and the primary source of noise is that which is transmitted through windows at the end of the room adjacent to a street. In this case, it would be advantageous to place the speaker's platform at the noisy end of the room, for the speaker will have a natural tendency to raise the level of his voice in the presence of noise, and furthermore, the listeners that are most distant from the speaker will then be in a quiet rather than a noisy environment.

Various types of partitions differ in regard to the relative acoustical energy on a partition which is transmitted through it is called its "transmission co-efficient". For example, a plastered

brick wall 8 inches thick has a transmission coefficient approximately equal to 1 one-hundredth the corresponding value for a glass window.

Now suppose we want to determine how good the wall structures of a room must be in order to reduce outside noises to an acceptable level. We must have some way of rating the over-all effectiveness of the boundaries of the room in reducing these outside noises. Such an over-all rating should include means of averaging the insulative properties of the bounding partitions and take into account the beneficial effect of sound-absorption in the room in reducing the level of the noise which is transmitted into it. One such method of rating is given by the "noise-insulation factor", defined by:

$$\text{noise-insulation factor} = 10 \log_{10} \frac{a}{t_1 S_1 + t_2 S_2 + t_3 S_3 + \cdots}$$

The term in the denominator is proportional to the ease with which air-borne sound can be transmitted into the room through all its bounding surfaces. The numerator a is equal to the total acoustical absorption in the room. This equation is particularly useful in estimating the acoustical requirements of the wall structures in reducing the level of outside noises.

The value of the noise-insulation factor that is required in any given situation can be determined by the following rule: Subtract the acceptable noise level from the average level of the outside noise; to this difference add 10 db as a factor of safety. The result is the noise-insulation factor required to furnish adequate sound insulation. Thus if the average outside noise level is 65, and the acceptable noise level from Table I for a particular room is 35 db, the noise-insulation factor should be about (65-35+10) or 40 db.

Because of the sound transmission coefficients of various types of partitions varies so widely, by as much as a hundred thousand, it

is frequently convenient to use a logarithmic scale for rating the effectiveness of partitions as sound-insulators. Such a scale is used in defining transmission loss which is the number of decibels by which sound energy is reduced in transmission through it. Therefore, the larger the value of transmission loss that a partition has the better it will be from the standpoint of sound-insulation. The results of experimental measurements show that the transmission loss for non-rigid porous materials, for example, glass wool - is very small compared with rigid materials used as partitions. When porous materials are used as partitions they provide but a negligible amount of attenuation unless the partition is exceedingly thick. Hence it is not practical to use them primarily as sound insulators. However they can sometimes be used to advantage in conjunction with rigid partitions.

The transmission loss of a rigid partition such as a brick, concrete, or solid-plaster wall depends roughly on the mass per unit area of the structure. The following figure shows this relationship quantitatively. These data, reproduced from "Acoustical Designing in Architecture" have been compiled from measurements taken by a number of different laboratories[2]. The transmission loss, averaged over the frequency range from 128 to 2048 cycles per second, is plotted against the weight in pounds per square foot of the partition. Although individual partitions may depart considerably from the values shown, the average increase for each doubling of the weight of the partition will be between 4 and 5 db. It is important to emphasize here that these represent average values and that the transmission loss is not the same at all frequencies. It is usually quite small at low frequencies and it increases, quite irregularly, at an average rate of from 3 to 6 db for each doubling of the frequency. It is because the trans-

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[2] Loc. cit., page 230.

mission loss is small at low frequencies that these frequencies are usually the most difficult to insulate against. All of you have probably been in an apartment house having poor wall construction where the low-frequency thump, thump, thump from the radio in the adjoining apartment could be clearly heard, whereas the higher frequency sounds carrying the melody were effectively blocked. Because of this variation with frequency, it is usually important, in determining the best type of partition for a particular problem, to consider the insulation values at different frequencies as well as the average value for all frequencies. Thus, if a particular noise has much of its energy concentrated in a certain frequency range, it may be advantageous to select materials or design structures that will provide high sound insulation for this frequency range.

The above graph shows that sound-insulation increases relatively slowly with the increase in mass of such a rigid partition. Hence, if this type of wall is employed, a very massive construction is required to supply a large amount of sound insulation. However, it is often possible to satisfy stiff requirements by the use of two relatively lightweight partitions which are isolated from each other; double walls which are structurally isolated can provide a means of obtaining high sound-insulation with a reasonable dead load. Staggered stud construction is one method of obtaining such beneficial structural separation. Also there are commercially available special nails or clips which have been designed for the construction of partitions with resilient attachment of lath. Such structures provide much more insulation against noise than do rigid partitions of equal weight.

Windows and doors are usually major weaknesses in the defense of buildings against outdoor noise. Even when windows are tightly

sealed -- as they should be from the standpoint of noise control -- single glazing does not offer much in the way of sound insulation. Increasing the thickness of the glass helps a little, but where a high degree of sound-insulation is required, it is necessary to employ a permanently-sealed double-window construction and use artificial ventilation. Doors should be heavy if they are to be effective in preventing the communication of sound through them. All cracks around the door must be sealed; a tight fit at all points can sometimes be achieved by the use of strips of rubber or felt at the head and jambs and by employing a special commercially available threshold closer. Even keyholes should be plugged.

Sound-absorptive materials are extremely useful for controlling noise in buildings. Not only do they reduce the noise which is transmitted into a building from the outside, but they are effective -- frequently indispensable -- in controlling noise which is generated within the building. Materials which have been especially designed to function primarily as sound absorbers are popularly known as "acoustical" materials. Commercially available products include prefabricated acoustical tiles, acoustical plasters, and blankets which have been fabricated from very porous materials such as glass wool. No one of these is the best for all jobs. For a particular installation, one's choice of an acoustical material should, of course, include a consideration of its sound absorptive properties -- choosing one that will meet the acoustical requirements of the installation. On the other hand, it is important not to overlook consideration of other characteristics of the material such as fire resistance, light reflection, decorative possibilities, structural strength and maintenance costs.

Acoustical materials provide one of the means by which air-

borne noise can be reduced at its source. An installation of acoustical material is usually helpful because it reduces the over-all noise level in a room; it helps to localize the source of noise to the region of its origin; and it reduces the annoying effect of reverberation.

The sound absorptivity of commercially available acoustical materials is usually expressed in terms of the average "absorption coefficient" of the material, which represents the fractional part of incident sound waves that is absorbed by the material.

The question arises as to how much absorption there should be in a room for purposes of noise reduction. It is important to realize that if there is already a considerable amount of properly placed absorptive material in a room, then the addition of acoustical material may not show any marked beneficial effect from the standpoint of over-all noise reduction -- here the law of diminishing returns operates. The following rule-of-thumb is useful in estimating, roughly, the number of units of absorption needed in a room where quiet is a prime requirement: Use enough absorptive material to provide a reverberation time of about 2/3 to 3/4 of the optimum for speech in that room[3]. The total absorption in a room, which we represented by the letter a in the equation given earlier, is determined by multiplying each of the surface areas in a room by its respective absorption coefficient, then summing all of these products. Incidentally, the absorption supplied by people in the room should be included. This contribution to the total absorption can be quite considerable in some buildings -- for example, in a theater, assuming a full house.

Since the absorptivity of an acoustical material varies with

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[3] For the optimum reverberation for speech see Fig. 9.11, Acoustical Designing in Architecture", loc. cit.

frequency, it is often important to choose one on the basis of the absorptivity-vs-frequency characteristic best suited to reduce the level of the noise to be suppressed. For example, in a building where the noise is predominantly in the low frequency range, one should make certain that the sound-absorptive treatment which is installed is efficient in this range.

For noise reduction purposes, the placement of acoustical materials in a room depends to a large extent on the shape of the room. Satisfactory results will be obtained in most rooms, for example, offices, if the acoustical treatment is applied to the ceiling, provided that the ceiling height is less than about 12 feet. For greater heights, it is usually important that some of the acoustical material be placed on the side walls. In general, the absorption in a room must be increased at least by a factor of 3 before a noticeable improvement in noise reduction is obtained. However, in the case of a high-ceilinged room in which all the acoustical treatment is on the ceiling, the addition of a fraction of this amount of absorption in the form of patches on the side walls may provide a marked improvement.

In applying acoustical materials for the control of noise in buildings, it is important not to overlook the treatment of corridors and stairwells. In many buildings, there are short passageways separating areas which should be quiet from areas that are noisy. These passageways should be treated as "sound-locks"; that is, the walls and ceiling should be a highly-absorptive acoustical material to aid in the isolation of these areas. Thus, such sound-locks are useful in a restaurant in preventing kitchen clatter from disturbing the dining room patrons. Similarly, it is a good idea to treat the boyer which separates a door opering on to a noisy street from private

offices. In cases such as this one, it is poor economy to apply acoustical material only in the private offices; it is equally important to treat the foyer and reduce the level of the noise which is fed into the offices.

In discussing the means by which noise is propagated in buildings, I used two principal classifications: air-borne and structure-borne sound. Of course, provisions should be made to prevent the communication of both types of noise. We have discussed some of the problems involved in the suppression of air-borne sound -- the selection of proper wall structures and the use of acoustical materials.

Nor let us consider briefly the problem of structur-borne noises. Wherever it is practical to do so, solid-borne energy should be reduced at its source. Previous speakers have indicated methods for reducing such noises arising from machinery and ventilation equipment, so we will not dwell on it here. However, I do want to emphasize the importance of suppressing noise from machinery vibration in the general problem of control of noise in buildings. Another common source of structure-borne vibration which is particularly objectionable in multiple dwelling units is that which arises from the plumbing. Quiet fixtures should be selected and properly installed to prevent the transmission of hammer-like and swishing noises. Wherever practical, the pipes should be isolated from the building structure. Where they are suspended from the ceiling, a resilient support should be used; and where they penetrate walls, they should be isolated from the partition by a compliant material such as felt, making sure that no cracks are left around the pipe that would reduce the over-all effectiveness of the wall for air-borne sounds. The insertion of a short length of flexible hose in the pipe can provide substantial reduction in the transmitted vibration.

Where quiet is a prime requirement, as in libraries, it is important to consider such details as the use of wagons with quiet rubber-tired wheels, the suppression of noise which arises from the pushing of chairs and the reduction of the clatter of footfalls. I would like to show the following cross-sectional drawing of a commercially available chair-glide which illustrates one general method of noise reduction. A chair, when pushed along a floor, ordinarily produces a racket because vibrations which arise from the frictional forces between the floor and legs are transmitted to the larger areas such as the seal, and radiated efficiently as noise. The glide shown here reduces the transmitted vibration by the insertion of a resilient member between the source of vibration and the radiating surfaces, and hence suppresses the noise which is generated in the room in which the chair is being pushed. Resilient floor coverings such as linoleum or rubber tile should be used to reduce the noise that is produced by footfalls and other impacts. Furthermore, a resilient floor covering is important from another aspect in the control of noise in buildings. It reduces the impact energy that is communicated to the building structure -- energy which is transmitted efficiently by the structure, and radiated elsewhere in the building. By employing a resilient floor construction, commonly referred to as a "floating floor" the energy of impaot that is communicated to the building structure can be reduced to an even greater extent.

The following figures shows one type of resilient floor construction which employs a commercially available sleeper chair. It is also possible to use rubber, cork, and other materials as the resilient member between the floated finish-floor and the structural floor. The value of such a construction depends on the complete isolation between the finish-floor and the structural floor. Therefore,

it is very important that this isolation is nowhere bridged by solid connections.

The principle of the suppression of solid-borne vibration by the placement of discontinuities in the transmission path is incorporated with the advantages of multiple wall structures in the so-called "discontinuous" construction. Here the walls of the room are built on a floating floor and the ceiling is suspended by resilient hangers. Essentially, the rooms in such a building are treated as a "box within a box". At the present time, the cost of this type of construction has limited it to special jobs where a very high degree of noise insulation is essential.

I think you will agree from a consideration of some examples that have been cited here that some improvement in the control of noise in buildings can be had by intelligent planning with little or no cash outlay. By the suppression of needless machinery noise and vibration the problems of noise control in buildings can be greatly simplified. Where quiet is a prime requirement, partitions should be carefully chosen from the noise-insulation standpoint rather than neglected in the hope that acoustical treatment will remedy the situation. Acoustical materials should also be picked with care, making sure that they will satisfy the requirements of the job. When all of these have been taken into account, it is absolutely essential that the good noise insulation that can be so obtained is not negated by a neglect of details such as cracks around doors and windows, or by an improperly designed ventilation system. The control of noise in buildings is essential to human comfort, and it can be attained.

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Abstract of an Address, "Effects of Noise on Human Behavior and Communication," by Hallowell Davis, Director of Research, Central Institute for the Deaf, St. Louis, Missouri.

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It is quite appropriate to open this symposium on noise abatement with a review of the Effects of Noise on Man. If noise had no effects on man we would not need to bother about abating noise. In fact the whole problem has practical meaning only to the extent that there are human limits or tolerances of some sort that we are able to define. Fortunately for this symposium there are indeed limits of tolerance of the human ear and of the human nervous system for noise. Unfortunately, however, and particularly for those who would like to write laws and ordinances tomorrow, these limits are still vague and uncertain. We do nevertheless begin to have some clear ideas as to orders of magnitude, and also as to where the problems lie and what kinds of human function are affected.

My task of reviewing this situation for you is made very easy by the fortunate circumstance that one of my colleagues, Dr. Karl Kryter, formerly of the Psycho-Acoustic Laboratory at Harvard, then of the Department of Psychology at Washington University and now Director of the Human Resources Research Laboratory at Bolling Air Force Base has recently prepared a report for the Office of Naval Research on almost exactly this subject. One of the very practical-minded bureaus

of the U. S. Navy wanted to know what noise levels would be permissible in various situations on naval vessels, and why. Dr. Kryter's report does not give the levels, partly because the question was not put to him in exactly that way, but he has made a very thorough, careful, and critical survey of our positive knowledge of the effects of noise on man. His work was done under a contract between the Office of Naval Research and the Central Institute for the Deaf. That is why I have been in close touch with the survey from the start, and that in turn is the only excuse I have for standing up here where Dr. Kryter ought to be and giving you, largely in his own words, the conclusions of his study. These conclusions I have discussed at length with Dr. Kryter and I can give them my personal endorsement as valid summaries of the present state of our knowledge. The full report, including an extensive bibliography, has just been published as Monograph Supplement I of the Journal of Speech and Hearing Disorders, and a limited number of copies are available at Central Institute for the Deaf.

Dr. Kryter's report was necessary for several reasons:

First, It had become common experience both in the Armed Forces and in industry that in many important situations noise interfered with communication by voice and even by electrical intercommunication systems.

Second, Injury to hearing by loud sounds had become generally recognized in the forms of so-called "boilermaker's deafness", "aviator's notch" and (more serious) "blast injury".

Third, Many people realized from their personal experience that noise can be annoying. All manner of vague ills and ailments, from insomnia and high

> blood pressure to inability to do mathematics or ride a bicycle have been attributed to the baneful effects of noise of one kind or another. But no matter how many times the stories were repeated in magazine articles or in anti-noise campaigns there was little certainty as to the reality of these effects or as to how much noise or what kind of noise was needed to produce them.

Dr. Kryter was therefore commissioned to find out and summarize what had been reported concerning these points and furthermore to examine the reports critically, to weigh the evidence and to tell what is the present extent of our definite knowledge of the effects of noise on man. Some of his findings may come as a shock to those who have quoted in good faith the results of experiments or surveys that are actually inconclusive because they were not conducted with sufficient scientific rigor. But by clearing away this underbrush, so to speak, Dr. Kryter shows us where the road lies, where some few reliable landmarks stand and the directions in which we should travel to achieve our goal of effective but rational control of noise.

Turning now to the specific findings of Dr. Kryter's report I quote from the conclusions of the first section entitled Noise and Behavior.

> "This survey shows that nearly all industrial and laboratory experiments which report that noise adversely affects work output are open to criticism because of poor experimentation and uncontrolled factors. (By 'work' is meant any mental and motor tasks not involving communication by speech.) On the other hand, experiments carried out with proper control of all pertinent factors reveal that steady or expected noises do not

adversely affect psycho-motor activity to any significant extent. As a matter of fact, there is some evidence that noise may 'insulate' a person from intermittent distractions in his environment so that on some tasks, such as aiming a gun, performance is better in noise than in quiet.

"The general ineffectiveness of noise on work output and on psycho-motor performance can be largely explained by a psychological and physiological adaptation and perhaps by an increase in effort on the part of the subjects. About 50% of subjects exposed for long periods to intense, and particularly to high-frequency noise, feel that exposure to such noise makes them more irritable than normal. Some comfort is gained by preventing steady noises from exceeding 90 db re .0002 dyne/cm^2 at the position of the listener. Most persons exposed to intense noise as high as 120 db re .0002 dyne/cm^2 as a matter of course in their work apparently become indifferent to it.

"Although steady-state noises appear to have little real effect on work output, it will have an adverse effect upon communication by speech or other auditory signals, and it has been experimentally demonstrated that the 'annoyance value' of a noise is related to its spectrum. Noises containing the higher frequencies of sound are more annoying than those of predominately low frequencies.

"Probably most of the experiments conducted on this problem did not reflect the full impact of noise on the performance of the office and industrial worker in that the studies were primarily confined to non-auditory work not involving communication, whereas communication is required in most occupations. Thus,

noise absorption and reduction should lead to greater efficiency and comfort of the office and industrial worker, although most of the experimental results so far have been negative or inconclusive."

The conclusions of the second section, entitled the Deafening Effects of Noise, are more positive, but Dr. Kryter does not believe that we yet know enough to do more than make a good guess as to the "probable" safe maximum intensity. Even this interesting and important figure of 85 db above .0002 dyne/cm^2 does not refer to the familiar over-all intensity of a noise but to separate components, that is to the noise in "critical bands". Of course Dr. Kryter explains in the body of his report this important concept of the critical band. The ear integrates the energy within a critical band so that the loudness and also the injurious effects and the interference with speech are very much the same as if the energy were all concentrated at one frequency as a pure tone. Sounds in different critical bands add their effects differently in increasing loudness, in interfering with speech, in injuring the ear and in giving readings on an ordinary sound level meter. (A critical band, by the way, is about 50 cycles wide from 100 to 1000 cps and is about 10 per cent of its central frequency at frequencies above 1000 cps.) Obviously, however, the over-all intensity reading of a sound level meter will be greater for a noise that spreads over several or many critical bands than it will be for any one critical band. It follows, therefore, from Dr. Kryter's conclusion, that a noise measured in the ordinary over-all way as 85 db would certainly be safe as far as deafening effects are concerned. This is about the level of very loud speech or a shout at five or six feet distance.

With these necessary preliminary explanations I quote in full

Dr. Kryter's general conclusions about the deafening effects of noise.

"(1) Exposure to intense noise from machinery causes partial and temporary hearing losses that persist for a few minutes to several hours. Apparently, continued repeated exposures over extended periods (years) may result in a partial but permanent deafness. The more intense the sound the greater the deafening effect. The maximum safe intensity at which no deafening effect will occur is probably in the neighborhood of 85 db above .0002 dyne/cm^2 for 'critical bands' of noise. The over-all intensity of a noise in decibels usually will not correctly indicate its deafening effect.

"(2) Both field and laboratory tests indicate that deafness occurs for the dominant frequency in a noise and/or for higher frequencies.

"(3) Exposure to gun fire and other shock or blast waves results in a partial deafness that lasts for a few minutes up to several days, and continued repeated exposure results in a partial but permanent deafness that may be progressive with continued exposure.

"(4) Rupture of the eardrum may be caused by blast waves or by extreme and rapid pressure changes resulting from rapid changes in altitude such as may occur in military flying and submarine activity. Deafness resulting from such insult is apparently due to secondary effects occurring in the middle ear such as infection, the development of fluids and exudates, and the rearrangement of middle ear structures in addition to possible direct damage to the cochlear structure.

> "Earplugs which afford 20 to 30 db of sound attenuation for the middle range of frequencies will in practically all present industrial and military situations where noise and shock waves are a problem afford sufficient protection from the noise to prevent deafness. The wearing of proper earplugs in intense noise fields improves speech communication as well as giving comfort and protection.
>
> "Earplugs individually molded and fitted to each person would probably be the most comfortable and adequate method of protecting an individual from high levels of noise. There are certain earplugs now manufactured which provide good sound attenuation but not all people can wear them with comfort. Dry cotton, which has been used extensively by military personnel, does not afford much protection against the low and middle range of sound frequencies although it does reduce to some extent the intensity of high frequencies which subjectively are the most annoying."

The gist of the third section of Dr. Kryter's report, which is entitled the Effects of Noise on Communication by Speech is contained in the first sentence of his conclusion, which reads: "Probably the most deleterious effect that noise has on man's behavior is the disruption or 'masking' of speech communication."

Most of this section of the report itself is rather technical, as Dr. Kryter reviews and explains in some detail how, by means of the so-called "Articulation Index", it is possible for the acoustic engineer to calculate in advance the effect that a particular noise will have on the ability of man to communicate by speech. This method is a notable technical and theoretical advance of the last decade, with major credit due to the research staff at the Bell Telephone Labora-

tories under the guidance of Dr. Harvey Fletcher. It should be very valuable in enabling engineers to meet specifications that may be laid down in terms of the possibility of communication. This in itself is a rather novel concept. We point out merely that it is quite an advance over the concept of specifications in terms of over-all noise levels. The effect of noise on the intelligibility of speech depends on its spectrum, that is on what kind of a noise it is, as well as on its intensity. The "Articulation Index" is calculated from these two aspects of noise. Unfortunately, as Dr. Kryter notes, there are still some aspects of noise such as its continuity or interruptedness that have not yet been taken into account.

For our present purposes, however, the point is that the most important effect of most noise is its interference with communication. This interference begins before a noise is intense enough to be hazardous in any other way. Note my use of the word "other". Interference with communication may, in many situations that require teamwork, constitute a very serious hazard. This point is so obvious that I need not develop it, yet it is overlooked repeatedly.

Even when safety is not involved a partial interference with communication obviously reduces the efficiency of many kinds of work. Errors from misunderstandings become greater or time is taken repeating instructions or dictation, or effort is expended in talking louder. The extra effort, even if successful in avoiding the errors, is at least an annoyance and may amount to a significant nervous strain. I shall return to this idea in a moment, but I remind you of Dr. Kryter's earlier conclusion that the effects of noise on performance have probably failed to appear as they should in studies of "work" or "output" because the output chosen for study was usually of the individual manual type. It is where output depends in some way

on communication by speech that it is probably most sensitive to noise.

Other effects of noise on such things as morale and general health are more subtle than those treated in Dr. Kryter's report. They are relatively insignificant in most military and many industrial situations where morale is high, where a certain amount of difficulty and hardship is taken for granted, and where men pride themselves on not being "panty-waists" but being able to "take it". The situation is very different in a hospital or a residential area where standards of comfort are very different from those in a battleship, a tank or a bomber. Here even a moderate disturbance may have disastrous effects upon morale through preventing sleep, and here complaining, whether about high prices, noise or socialistic tendencies in government is perfectly acceptable socially. In a hospital, for example, the neutral hum of an electric fan may actually prevent complaints about voices down the hall because it masks them and they are not heard. Here the fainter but meaningful sound is more annoying than the steady, neutral, matter-of-course noise. It takes more than decibels to measure this kind of annoyance.

Now a word of reassurance about ultrasonic noises. "Ultrasonics" are sounds that are so high in frequency that they are inaudible. They have been blamed for many vague ills and discomforts including nausea, general weakness and irritable disposition. It now seems clear that high frequencies, unless they are tremendously intense, (intense enough to cook a small animal by the heat generated in its fur by the absorption of the sound), are quite harmless. It is the decibels that hurt, not the cycles per second. And the strange vague symptoms, some of which are apparently real, are probably due to very intense middle and low frequencies which were also present as well as the ultrasonics. I refer, of course, to the exhaust noise of

turbo-jet engines.

One thing is clear: we can be annoyed by something, but a lift in morale makes us forget it. Something may be a bit unpleasant but if we are determined to do the job we put up with it. We begin to feel tired, but extra pay or desire to finish the job or stern necessity keeps us going full speed, even though it takes a little more effort and we may feel more tired afterward. Motivation is so important and so variable that we cannot reasonably hope to measure objectively the effects of annoyance or of moderate fatigue. Nevertheless annoyance and fatigue, like headache and general irritability, may be real signs of the beginning of an exhaustion of our reserve of "nervous energy". That is a bad phrase--"nervous energy", and I use it only to mean our ability to increase our efforts a little in response to increased motivation. Until the reserve is exhausted we can keep up our performance: but we like it less and less and it takes more and more effort. The sense of effort and the sense of fatigue and the general irritability are just nature's first warnings that our reserves are beginning to be used up. We can't measure the reserve but we can heed the danger signs. And loud and unexpected noises and noises that frustrate our attempts at necessary communication can certainly add to the stress and difficulty of any situation and thereby exhaust our reserves more rapidly. Perhaps the total stress of a difficult situation, as in military operations, is so great that this little extra load is unnoticed and insignificant by comparison; but sometimes it may be that the stress of noise is one of several more or less equal loads. Then noise may well be the straw that breaks the camel's back. All of this is difficult to prove but I think it makes sense from the medical point of view and justifies our continuing efforts at noise abatement.

rom
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Lombard 1810-R

Mailed: October 18, 1950

FOR RELEASE: Immediate

CHICAGO -- Homeowners and industries of 31 central Wisconsin counties are being assured continued low cost and better electrical service in the next five, ten, and twenty years as a result of recent studies.

Electrically speaking, the entire area served by the Wisconsin Power and Light Company was set up in a single room here at Illinois Institute of Technology and a team of engineers from Illinois Tech and Wisconsin Power analyzed problems of design and operation which will effect householders of the area.

The work was done on Illinois Tech's $100,000 A-C network calculator, an elaborate instrument for simulating power system conditions.

Local experts who worked on the project are: A. J. Shafer, 2557 Chamberlain avenue, Madison, planning engineer; and L. W. Stockner, 113 South Owen drive, Madison, relay engineer.

The Wisconsin Power and Light Company serves all or most of Adams, Columbia, Dane, Dodge, Fond du Lac, Green, Green Lake, Iowa, Juneau, LaFayette, Marquette, Rock, Sauk, Sheboygan, Walworth, and Waushara counties, and major parts of Grant, Langlade, Marathon, Monroe, Portage, Richland, Shawano, Vernon, Waupaca, and Winnebago counties. Its service lines also extend into several other counties.

With the network calculator, any power system can be exactly reproduced. Instead of time-consuming mathematics, an electrical engineer can set up, in miniature, a system representing lines extending for hundreds of miles and measure power and voltages at any point under any condition.

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Enough circuit elements are available to represent 12 generating stations, 100 transmission lines or transformers, 40 loads, and 18 variable ratio transformers.

The miniature system can be adjusted to simulate any operating condition. From the readings, the engineers can immediately determine the effect of additional loads, methods by which they can be carried, system performance under normal or emergency conditions, and system changes that can, should, or must be made in the future.

The engineers of the Wisconsin company supplied complete information on the local system and characteristics of all lines, generators, transformers, loads, and voltages were reduced to calculator values.

The circuits on the calculator were then connected in the same manner as the real equipment and adjusted to have equivalent values. When all conditions were matched, the setup became an exact replica of the Wisconsin system.

Changes could be made, new lines added, new loads served, new generators put into operation, etc., and accurate immediate measurements were made at all points to show the effects of such changes.

Evrett B. Eggers, electrical engineer at Illinois Tech, is in charge of the calculator.

-jeg-

from...
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3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: October 18, 1950
FOR RELEASE: Immediate

CHICAGO -- Milton E. Parker, of Barrington, has been appointed to the board of editors for a book entitled "Food Packaging and Packing."

Parker is director of the food engineering program at Illinois Institute of Technology.

The book will contain approximately 25 articles from experts in the food packaging field and will cover various phases of the industrial and military aspects of packing and packaging.

Published by the Reinhold Publishing corporation, New York, N.Y., "Food Packaging and Packing" is scheduled for release in the spring of 1951.

-mwm-

from...
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Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: October 18, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Ellery H. Harvey, of 987 Ridgewood drive, Highland Park, has been appointed to the board of editors for a book entitled "Food Packaging and Packing."

Harvey is professor of food engineering at Illinois Institute of Technology and founder of the Association of Research Directors.

The book will contain approximately 25 articles from experts in the food packaging field and will cover various phases of the industrial and military aspects of packing and packaging.

Published by the Reinhold Publishing corporation, New York, N.Y., "Food Packaging and Packing" is scheduled for release in the spring of 1951.

-mwm-

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Lombard 1810-R

Mailed: October 18, 1950

FOR RELEASE: Immediate

CHICAGO -- Two professors and one associate professor at Illinois Institute of Technology have been elected officers of the Institute's Faculty Council for 1950-51. They are:

Dr. Roland A. Budenholzer, professor of mechanical engineering -- chairman; Henry C. Spencer, professor and director of the department of technical drawing -- vice chairman; and Dr. Morton A. Countryman, associate professor of physics -- secretary.

-mtm-

from...

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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Ned E. Blood, 3254 South Michigan avenue, and Lon A. Williams, 120 East 70th street, have been pledged to Sigma Phi Epsilon social fraternity at Illinois Institute of Technology. Both are majoring in mechanical engineering.

-mwm-

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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Ned E. Blood, 18, son of Mrs. James H. Blood of 48 Walnut street, Oshkosk, Wisconsin, has been pledged to Sigma Phi Epsilon social fraternity at Illinois Institute of Technology, Chicago.

Blood graduated from Oshkosh high school in June of 1950. At Illinois Tech, he is majoring in mechanical engineering.

-uwm-

from...
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Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- David R. Eubanks, 20, of 7406 Parnell avenue, has been pledged to Sigma Phi Epsilon social fraternity at Illinois Institute of Technology.

Eubanks is a sophomore student majoring in mechanical engineering. He graduated from Gage Park high school in January of 1948.

-mwm-

from...

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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Edward R. Kramer, 24, of 1355 Touhy avenue, has been pledged to Phi Kappa Sigma social fraternity at Illinois Institute of Technology.

Kramer is a sophomore majoring in mechanical engineering.

-mwm-

from...
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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Louis C. Dvorak, 3421 Oak Park avenue, Berwyn, and Edward A. Scherer, 1045 South Ridgeland avenue, Oak Park, have been pledged to Phi Kappa Sigma social fraternity at Illinois Institute of Technology.

Dvorak, a graduate of Austin high school, is a senior student majoring in visual design at the Institute of Design of Illinois Institute of Technology. Scherer, a graduate of Oak Park high school, is a freshman majoring in mechanical engineering.

-mwm-

from...
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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Four southwest side students have been pledged to Phi Kappa Sigma social fraternity at Illinois Institute of Technology. They are:

James C. Fitzgerald, 11355 Lothair avenue, freshman in civil engineering; Andre Marechal, 7649 South Paulina avenue, freshman in electrical engineering; Kenneth A. Olejnik, 5441 South Kildare avenue, freshman in food engineering; Glenn E. Swearingen, 8833 Laflin avenue, freshman in architecture.

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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Six south side students have been pledged to Phi Kappa Sigma social fraternity at Illinois Institute of Technology.

Those living at the fraternity house, 3236 South Michigan avenue, are:

Arthur W. Blankenburg, freshman at the Institute of Design of Illinois Institute of Technology; Harold W. Field, freshman in property insurance; Wayne R. Popham, freshman in mechanical engineering; Marvin D. Wampler, freshman in property insurance.

Others are:

Paul C. Augustine, Jr., 3240 South Michigan avenue, freshman in mechanical engineering; John T. Blosser, 5142 South Michigan avenue, freshman in property insurance.

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from...

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Public Relations Department
James W. Armsey, Director

Mailed: October 19, 1950
FOR RELEASE: Immediate

CHICAGO -- Randall E. Harnish, 17, of 321 Oaklawn avenue, Elmhurst, has been pledged to Phi Kappa Sigma social fraternity at Illinois Institute of Technology.

A graduate of York Community high school, Harnish is a freshman majoring in fire protection and safety engineering at Illinois Tech.

-mwm-

from

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Lombard 1810-R

Mailed: October 20, 1950
FOR RELEASE: Immediate

CHICAGO -- Housewives and industries of northeastern Wisconsin and western upper Michigan are being assured low-cost and better electrical service in the next five, ten, and twenty years, as a result of studies recently completed.

Electrically speaking, the entire area served by the Lake Superior District Power Company was set up in a single room at Illinois Institute of Technology here, and a team of engineers from Illinois Tech and Superior Power analyzed problems of design and operation which will affect homeowners in the Ashland, Hayward, Ironwood. Ladysmith, Medford and Park Falls areas.

The work was done on Illinois Tech's $100,000 A-C network calculator, an elaborate instrument for simulating power system conditions.

Local experts working on the project are: R. L. Boisen, 1115 Ellis avenue, Ashland, chief engineer, and H. L. Munch, 409 East 8th street, Ashland, transmission engineer.

With the network calculator, any power system can be exactly reproduced. Instead of time-consuming mathematics, an electrical engineer can set up, in miniature, a system representing lines extending for hundreds of miles and measure power and voltages at any point under any condition.

Enough circuit elements are available to represent 12 generating stations, 100 transmission lines or transformers, 40 loads, and 18 variable ratio transformers.

-more-

The miniature system can be adjusted to simulate any operating condition. From the readings, the engineers can immediately determine the effect of additional loads, methods by which they can be carried, system performance under normal or emergency conditions, and system changes that can, should, or must be made in the future.

The engineers of the Superior Power company supplied complete information on the local system; and characteristics of all lines, generators, transformers, loads, and voltages were reduced to calculator values.

The circuits on the calculator were then connected in the same manner as the real equipment and adjusted to have equivalent values. When all conditions were matched, the setup became an exact replica of the Superior system.

Changes could be made, new lines added, new loads served, new generators put into operation, etc., and accurate immediate measurements were made at all points to show the effects of such changes.

Evrett B. Eggers, electrical engineer at Illinois Tech, is in charge of the calculator.

-jeg-

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Mailed: October 23, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Edwin R. Whitehead, director of electrical engineering at Illinois Institute of Technology, has been reappointed to the Illinois Professional Engineers Examining Committee for a three-year term.

He has served as a member of the committee for the past two years.

Dr. Whitehead joined the Illinois Tech staff in 1946 as research professor of electrical engineering, and was named director of the department in 1947. From 1932 to 1946 he was general engineer in the electrical engineering department of the Duquesne Light Company, Pittsburgh.

A native of Ash Grove, Missouri, Dr. Whitehead received his bachelor's degree in 1928 at the University of Colorado, and his master's in 1935 and doctor's in 1944, both from the University of Pittsburgh.

He is 46, married, has two sons, and lives at 9120 Fairview avenue, Brookfield.

-jeg-

ws from

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Mailed: October 23, 1950
FOR RELEASE: Immediate

CHICAGO -- A noted husband-wife team of artists has been appointed instructors in life drawing in Illinois Institute of Technology's architecture department.

They are the Paul Wieghardts. Mrs. Wieghardt is known professionally as Nelli Bar.

Both were born in Germany and studied at the School of Fine Arts, Cologne, and the Academy of Fine Arts, Dresden. They came to the United States in 1940, and have worked, taught and exhibited extensively in this country.

Mr. Wieghardt, a painter, is represented in the collections of the Smith College Museum, Phillips Memorial Gallery in Washington, Rosenwald Collection, Barnes Foundation, Berkshire Museum (Pittsfield, Mass.), and the Albright Art Gallery, Buffalo, as well as numerous private collections.

Nelli Bar, a sculptor, has exhibited in New York, Philadelphia, and Chicago, and has had one-man shows at the Berkshire Museum, Harvard University, Bonestall Gallery (New York), and Museum of Fine Arts (Springfield, Mass.)

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Mailed: October 24, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Karl B. McEachron, manager of engineering of the General Electric Company, will address the November 15 meeting of the Illinois Institute of Technology chapter of Sigma Xi, honorary research society.

He will speak on "Lightning and Lightning Protection."

The meeting is free and open to the public and will begin at 8 p.m. in the Chemistry auditorium, 33rd and Dearborn streets.

Dr. McEachron is distinguished in the field of lightning and static phenomena. From 1936 to 1940 he was director of the Institute of Electrical Engineers, and vice president of the group from 1942 to 1944.

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Mailed: October 24, 1950
FOR RELEASE: Immediate

CHICAGO -- The "engineer-in-training" portion of the State examination leading to registration as a professional engineer will be held November 16 at Illinois Institute of Technology.

Dr. Edwin R. Whitehead, director of the electrical engineering department at Illinois Tech, is a member of the Illinois Professional Engineers Examining committee.

-jeg-

from

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Mailed: October 24, 1950

FOR RELEASE: Immediate

CHICAGO -- The city had its cleanest air on record last month, with a total dustfall of only 33.94 tons per square mile, chemists at Armour Research Foundation of Illinois Institute of Technology reported today.

National Smoke Abatement week and Chicago's Cleaner Air week are now in progress, Maurice Kayner, chief analytical chemist at the Foundation, pointed out.

"Chicago's air was cleaner during September than in any month since we began measuring and analyzing dustfall in 1946," Kayner said. "The city's record has improved continuously since then."

As a public service, the Foundation analyzes dust collected from 24 sampling stations by the city Smoke Inspection and Abatement department.

"This is a good time to encourage smoke and dust abatement," Kayner said. "Home owners are beginning to fire their furnaces. The fall winds will pick up dirt and ashes left out in the open and add to the dustfall."

August is usually the month of lightest dustfall and January the heaviest. A total of 34.12 tons per square mile fell in August of this year, and a total of 33.97 tons in August of 1949. The worst deluge of dust, a total of 128.5 tons per square mile, fell in January of 1947.

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Mailed: October 25, 1950
FOR RELEASE: Immediate

CHICAGO -- Raymond D. Meade, associate professor of education and former director of the Korea Technical Institute, has been named director of placement and cooperative education at Illinois Institute of Technology.

The appointment was announced today by Dr. Henry T. Heald, Institute president.

He replaces Harold L. Minkler who resigned to accept a post as supervisor of technical personnel in the industrial relations department of the aircraft engine division of the Ford Motor Company.

In his new position, Meade will work with industry in the Chicago area to explore and establish new study-and-work programs of benefit to industry and students. In the cooperative program, students spend alternate periods in the classroom and in industrial employment. Sixty-seven companies are participating in the program this semester.

Meade received his bachelor of science degree at the University of Oklahoma in 1923 after overseas service in World War I. He was awarded his master's degree in 1933 at the University of Chicago.

He became registrar and associate professor at Illinois Tech in 1948. In May of this year he was named director of the Korea Technical Institute established by the Economic Cooperation Administration under the direction of Illinois Tech. He arrived in Korea May 29 and was joined in Seoul by the other 22 members of his staff June 25, six hours before the invasion of South Korea.

The group was evacuated to Japan by air on the last plane to leave the beleaguered capital, and returned to the United States in September.

Meade, 52, of 1234 Sunnyside avenue, Chicago Heights, is married and has two daughters.

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Mailed: October 26, 1950
FOR RELEASE: Immediate

CHICAGO -- The Illinois Tech basketball team will open its 1950-51 season December 5 against Chicago Teachers College at home.

During the season, the Techawks will meet three new opponents. The University of Omaha, DePauw University, and Carroll college are new-comers on the 17-game schedule announced today by Bernard "Sonny" Weissman, athletic director.

The schedule:

Dec. 5	Chicago Teachers	Home
Dec. 8	U. of Chicago	Home
Dec. 12	Illinois (Navy Pier)	Home
Dec. 15	North Central	Home
Jan. 6	Concordia (RF)	Away
Jan. 9	North Central	Away
Jan. 11	Milwaukee Teachers	Home
Jan. 13	U. of Chicago	Away
Jan. 15	Wheaton	Away
Feb. 1	U. of Omaha	Home
Feb. 7	DePauw	Away
Feb. 10	Carroll College	Away
Feb. 13	Chicago Teachers	Away
Feb. 15	Carroll College	Home
Feb. 20	Concordia (RF)	Home
Feb. 23	Milwaukee Teachers	Away
Feb. 26	Illinois (Navy Pier)	Away

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Mailed: October 26, 1950
FOR RELEASE: Immediate

CHICAGO--An unusual exhibition of particular interest to persons in advertising and graphic arts will be held November 1 through November 24 at the Institute of Design of Illinois Institute of Technology.

The exhibit will feature the works of Hans Schleger, professor at the Institute. Schleger is widely known in Europe by the pseudonym, Zero.

Schleger has gained international prominence for his design of trade-posters, and was a leader in the movement to introduce contemporary forms of expression to design, publishing, and typography.

His works in the field of design have been exhibited in Paris, Vienna, Prague, Amsterdam, and the Museum of Modern Art in New York. In 1949 the American Institute of Graphic Arts exhibited his works.

The exhibition, at the Institute, 632 North Dearborn street, is free and open to the public.

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Mailed: October 26, 1952
FOR RELEASE: Immediate

CHICAGO -- Dr. Arthur Canter, former clinical psychologist for the Veteran's Administration, has been named clinical psychologist at the Institute of Psychological Services of Illinois Institute of Technology.

The announcement was made today by George S. Speer, director.

Canter received his bachelor's degree in 1946, his master's in 1948, and his doctor's in 1952, all at the State University of Iowa.

In 1948 and 1949 he was a clinical psychologist at the VA Hospital, St. Cloud, Minnesota, and in 1950 returned to Iowa where he worked as a clinical counselor.

He is a member of the Iowa Academy of Science, and the American Psychological Association.

Canter is 29, married, the father of one child, and lives at 9961 Elm Circle, Oak Lawn, Illinois.

-jeg-

from

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Mailed: October 26, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 6 P.M. (EST), MONDAY, OCTOBER 30, 1950

BOSTON--Colleges and universities are woefully unprepared for the existing danger of residence hall fires, and the insurance industry must share responsibility for any future tragedy.

That was the warning sounded today by John J. Ahern before the annual meeting of the Federation of Mutual Fire Insurance Companies here.

Ahern, director of fire protection and safety engineering at Illinois Institute of Technology, cited the serious trend in college dormitory fire in recent years.

"College students have become the step-children of the safety movement. Except in the larger state-supported universities, even minimum precautions for the protection of students are sadly and dangerously lacking.

"Many colleges are not aware of the hazards they are harboring. Some institutions cannot afford necessary help, vital as it may be. That is where the insurance companies must step in."

He pointed to the hazardous, traditional-type dormitory, fraternity, and sorority building which was "built to burn and burn quickly."

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"This building has a large open central staircase which conducts fire quickly to the upper floors. It also has an attic under a wooden roof which bridges division walls and serves to spread the fire across the entire structure.

"This is made even more serious by the practice of using the attic space as part of the air circulation system with vents from rooms emptying into the attic. Fire in any room is thus carried to the attic and throughout the structure."

Ahern pointed out that the mature G.I. student is passing from the college campuses and younger, less responsible students are taking his place. In many cases it is the first time the student has been away from home, and he is unaware of the routine safety precautions his parents have taken.

"There is the all-too-common practice of overloading electrical circuits by connecting desk lamps, floor lamps, electric clocks, radios, electric razors, and hot plates to a single outlet. Many college dormitories were built before the advent of the electrical age we know today, and their electrical systems cannot carry the load imposed on them."

Other inadequacies pointed out were lack of emergency exits, sub-standard watchman service, lack of automatic alarm systems, and lack of instruction in use of extinguishers.

He urged insurance companies to take the initiative in educating not only the students, but college administrators as well, in minimum safety precautions, and called upon educators to mend their fences while they can.

"Now is the time to eliminate fire-traps. The overcrowding wave is generally past, and colleges face a period of decreased enrollment. It is now possible to eliminate older, combustible buildings. Educational institutions should take steps now with an eye to a future peak wave brought on by the high war-time birth rate. "Otherwise," Ahern warned, "it may be too late."

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END ADVANCE FOR RELEASE AFTER 6 P.M. (EST), MONDAY, OCTOBER 30, 1950

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Lombard 1810-R

Mailed: October 26, 1950
FOR RELEASE: Immediate

CHICAGO -- A new $10,000 rubber research laboratory has been established at Armour Research Foundation of Illinois Institute of Technology, W. E. Mahin, director of research, announced today.

Specific projects now in progress include custom compounding of rubber stocks for specialized uses and a basic study of new types of petroleum oils and resins in the compounding of rubbers.

A 200-ton hydraulic press, a rubber mill, and other pieces of heavy equipment were donated jointly by the Foundation and the White Cap company of Chicago. Various pieces of testing equipment were donated by the Precision Scientific company, also of Chicago.

Dr. Alfred G. Susie, supervisor of rubber and plastics research at the Foundation, said that a staff of rubber specialists will work with both crude-natural and synthetic rubbers.

"The retraction or 'snap-back' quality of uncured rubber is very limited," Dr. Susie explained. "By proper compounding, we can not only improve the retraction qualities but also build in a resistance to heat build-up, abrasion, ozone, stain, and solvents."

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Mailed: October 27, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 11:30 A.M. (CST), MONDAY, OCTOBER 30, 1950

CHICAGO--If American industry spent half as much money each year for scientific research and development as it does for advertising, it could greatly improve our defense against war and insure a constantly rising standard of living, a research director said today.

"The consumer products that give us better health, more pleasure, and greater leisure depend initially upon scientific research," Dr. Haldon A. Leedy, director of Armour Research Foundation of Illinois Institute of Technology, said.

He spoke this morning on "Frontiers Through Research" at the annual meeting of the National Lubricating Grease Institute at the Edgewater Beach Hotel.

"It is only after the basic research is completed and the product is developed that modern mass production and distribution methods can be put in play. Yet we spend more than five times as much for the advertising phases of marketing as we do for scientific research."

Advertising is a vital part of the marketing process and, indeed, a vital part of our whole economy, but it is sometimes overemphasized at the expense of other equally important steps in the process of getting products to the consumer, he said.

"Current advertising expenditures in all media--newspapers, radio, television, magazines, direct mail, specialized publications, outdoor posters, and other miscellaneous methods--exceed $5 billion a year.

-more-

"A liberal estimate of the money spent annually by industry on scientific research is $750 million, excluding expenditures by the government.

"It is primarily through research that new products can come into being," Dr. Leedy said.

"DuPont spent 13 years and $27 million on nylon before large-scale production got under way," he pointed out. "For every research project that succeeds, many fail, but the successes make possible the continued search beyond the frontiers of science for more benefits to mankind.

"Money spent for scientific research will yield many times the original investment in the long run. Indirectly it will aid the advertising profession because it will supply new and better material on which to base appeals to the consumers of America.

"Business leaders should not be content to stay where they are. As a matter of fact, they can't; they either go forward or backward. One of the best ways to progress is engage in scientific research and make wise use of its results."

--jwa--

END ADVANCE FOR RELEASE AFTER 11:30 A.M. (CST), MONDAY, OCTOBER 30, 1950

from
ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

Day Phones:
Illinois Institute of Technology — CAlumet 5-9600, Ext. 545
Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: October 30, 1950
FOR RELEASE: Immediate

Memo to Radio Editors and Radio Stations:

Pedro Antonio Gordillo, 28, fellowship winner at Illinois Institute of Technology, will participate Sunday (November 19) in the Quiz Kids' radio program. The show is broadcast each week over 161 stations of the NBC network.

Press release on Gordillo is enclosed.

-- Jim Armsey

ws from

ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

Director of Public Relations — James W. Armsey
Day Phones:
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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 3
Night Phone:
Lombard 1810-R

Mailed: October 30, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Joanne Starr Malkus, assistant professor in physics at Illinois Institute of Technology, has been awarded a $5,179 research grant by the Office of Naval Research for meteorological investigations.

Primary purpose of the project will be a study of the life-histories, structure, and behavior of cumulus clouds.

Cumulus clouds are the most common cloud form in the subtropical and trade-wind areas, commonly covering nearly half the Pacific Ocean, from San Francisco to Honolulu.

These clouds, which have often been likened to airborne cotton puffs, can appear from nowhere or completely disappear in as little as five minutes to half an hour.

The object of the study is to gain information on the early stages of the cloud formation and to form practical analyses of thunderstorms and violent gusts and drafts encountered by aircraft in later stages of the cloud formation.

The problems and possiblilities of rain-making by seeding clouds also may be clarified by such a study.

-jeg-

s from

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Chicago 16, Illinois

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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: October 30, 1950
FOR RELEASE: Immediate

CHICAGO -- Pedro Antonio Gordillo, 28, of Cordoba, Argentina, has been awarded a one-year fellowship to study regional and city planning at Illinois Institute of Technology (Chicago, Illinois, U.S.A.).

Announcement was made today by Dr. J. T. Rettaliata, vice president and dean of engineering at Illinois Tech.

Gordillo was one of 85 outstanding graduate students from 24 countries throughout the world who earned a Rotary Foundation Fellowship for advanced study abroad during 1950-51.

Gordillo graduated from the National College of Monserrat, Cordoba, in 1940; in 1947, he earned his bachelor's degree in civil engineering, graduating with highest honors from the University of San Carlos, Cordoba. He was also awarded the Gold Medal and Diploma of Honor, given annually by the university to its most outstanding student.

He is a member of the Engineers Center of Cordoba, the Pan-American Union of Engineers, and the American Concrete Institute of Detroit.

-mwm-

from

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Night Phone:
Lombard 1810-R

Mailed: October 30, 1950
FOR RELEASE: Immediate

CHICAGO -- Twenty-five women will compete for queen of Illinois Institute of Technology's Integral ball Saturday evening (November 4) in the Grand Ballroom of the Sherman hotel.

The Integral queen will be selected by Patricia Stevens, Patricia Stevens Modeling School; "Sonny" Bernard Weissman, director of athletics at Illinois Tech; and Frankie Masters, band leader for the dance. Masters will also preside at the crowning ceremonies.

-mwm-

from

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Night Phone:
Lombard 1810-R

Mailed: October 30, 1950
FOR RELEASE: Immediate

CHICAGO -- The music of band leader Frankie Masters will draw 1000 Illinois Institute of Technology students to the Grand ballroom of the Sherman hotel Saturday evening (November 4) for their annual Integral Ball.

During intermission, 25 contestants will compete for queen of the ball and Masters will preside at the crowning ceremonies.

-mwm-

from
ILLINOIS INSTITUTE OF TECHNOLOGY
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Chicago 16, Illinois

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Night Phone:
Lombard 1810-R

Mailed: October 31, 1950
FOR RELEASE: Immediate

CHICAGO -- Dr. Christopher E. Barthel, Jr., has been named assistant director in charge of personnel at Armour Research Foundation of Illinois Institute of Technology. He has been chairman of physics research at the Foundation since April, 1948.

Dr. E. H. Schulz becomes acting chairman of the physics department and continues as chairman of electrical engineering research, a position he has held since June, 1947.

Both appointments were announced today by Dr. Haldon A. Leedy, Foundation director.

In his new position, Dr. Barthel will be responsible for recruitment operations, professional development, and personnel administration for a group of almost 700 technical and non-technical staff members.

Dr. Barthel joined the Foundation in November, 1947, as assistant chairman of physics research. During the war, he helped organize, staff, and operate the naval ordnance laboratory at White Oaks, Md.

A native of Baton Rouge, La., Dr. Barthel attended Louisiana State University and received the degree of Ph.D. from Iowa State College in 1940. He served on the faculty of Washington and Lee University from 1933 to 1938.

Dr. Barthel, who is 39, lives at 1545 Spruce, Northbrook.

-more-

Dr. Schulz was assistant professor of electrical engineering at the University of Texas and Illinois Tech before he joined the Foundation in August, 1946. During the war, he was in charge of various phases of a military training program concerned with electronics and radio at IIT. A native of Lockhart, Texas, Dr. Schulz attended the University of Texas, graduating in 1935. He received the degree of Ph.D. from Illinois Tech in 1946.

Dr. Schulz, who is 37, lives at 650 Hillside, Elmhurst.

-was-

from
ILLINOIS INSTITUTE OF TECHNOLOGY
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Chicago 16, Illinois

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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: October 31, 1950
FOR RELEASE: Immediate

CHICAGO--The new Institute of Gas Technology building will be dedicated November 2 on the expanding near south side campus of Illinois Institute of Technology.

The new structure, completed and equipped at a cost of $900,000, houses the research and educational facilities and activities of the industry-sponsored Institute.

Frank C. Smith, president of the Houston Natural Gas Corporation and chairman of the industry committee which organized the Institute, will be the principal speaker at the dedication. Other speakers will include Dr. Henry T. Heald, president of the Institute, and Elmore S. Pettyjohn, director.

The dedication will coincide with the annual meeting of the Institute's board of trustees and will be attended by leaders of the nation's gas industry which serves more than 70 per cent of the country's total population.

Frank H. Lerch, Jr., president of the Consolidated Natural Gas Company, is chairman of the board. The 10:30 a.m. meeting will be followed by a luncheon on the Illinois Tech campus.

With two stories and a full basement, the building is 72 ft. by 168 ft. in a plot 264 ft. by 265 ft. It is located at 17 West 34th street, and extends from State to Dearborn streets along the south side of 34th street.

It is of buff brick and reinforced concrete construction with large glass areas common to other new classroom and laboratory buildings on the campus. It was designed by Ludwig Mies van der Rohe, distinguished head of Illinois Tech's architecture department.

-jeg-

ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: October 31, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 1:00 P.M. (CST), ~~FRIDAY,~~ thursday, NOVEMBER 2, 1950

CHICAGO -- Raymond D. Meade, former director of the Korea Technical Institute, today urged the United States to help convert European "have-not" nations into free, sovereign states, instead of playing fireman to recurring blazes of revolt.

Meade, associate professor of education and director of placement at Illinois Institute of Technology, spoke before Illinois Tech alumni at a noon luncheon in the Club room of the Art Institute.

Established by the ECA for operation by Illinois Tech, the ill-fated Korea Technical Institute disbanded after the fall of Seoul.

"The United States," Meade advised, "should employ a little foresight by clearing European and Asiatic fire hazards of poverty and political unrest before they ignite and burst into flame."

He suggested four ways to stabilize "have-not" countries:

1. Send American experts to smooth out technical and economic difficulties.
2. Use counter-propaganda such as the Voice of America and capable spokesmen.
3. Give financial aid.
4. Establish educational missions.

Meade accused Russia of inciting the Korean war as the first in a series of revolutions aimed at crippling American economy. "Russia's threat on American

-more-

economy has just begun. Korea is merely the first straw in the haystack of revolution. The next is obviously Indo-China while the Philippines, Burma, and Iran are growing danger spots."

We have dispatched large numbers of men and have invested huge sums of money to aid in the Korean defense of democracy. And this is a comparatively small contribution in the light of what Russia undoubtedly is plotting for our future, he said.

Meade said Russia is conducting an ideological and psychological warfare to disrupt American management and labor and, through internal turmoil, throw one at the throat of the other.

"Already the Korean episode has taken toll on our economy by limiting housing through the barrier of 'more money down' and by restrictions on credit buying.

"Korea is a fertile field for scientific and industrial exploration. American experts are needed to organize, develop, and establish industries, and to administer productive enterprises. In every way," he emphasized, "Korea should be encouraged to cecome self sufficient."

But before that job can be done, the United Nations must spend several months, following cessation of hostilities, in emergency relief work and rehabilitation of the ruined republic.

"The Korean war should convince us to take the offensive and assist the 'have-nots' before we are forced to their defense."

-mwm-

END ADVANCE FOR RELEASE AFTER 1:00 P.M. (CST), Thursday, ~~FRIDAY~~, NOVEMBER 2, 1950

from
ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: November 2, 1950
FOR RELEASE: Immediate

CHICAGO -- "Room Service," a three-act comedy by Murray and Boretz, will be presented by Illinois Institute of Technology's Campus Players as their first production of the new school year.

The play will be given at 8 p.m., November 9, 10, and 11, in the Student Union auditorium, 33rd and Federal streets.

Henry W. Knepler, staff English instructor, is founder and director of the student players group. He lives at 5217 University avenue.

South side cast members are:

Ralph Stusrud, 3200 South Michigan avenue, Theodore Lewis, 6105 South Woodlawn avenue; and Arthur Blankenburg, Hammond, Indiana.

--mwm--

from

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Henry W. Knepler, staff English instructor, is founder and director of the student players group.

Southwest side cast member is:

John E. Murphy, senior in industrial engineering, 8612 South Justine street.

-mwm-

from

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Henry W. Knepler, staff English instructor, is founder and director of the student players group.

West side cast members are:

Howard Zimmerman, 1538 South Tripp avenue, senior in psychology; Miss Suzanne Feld, 1619 South Ridgeway avenue, freshman in psychology; Miss Helen A. Tichy, 2506 West 50th street, senior in biology.

-mwm-

from

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Henry W. Knepler, staff English instructor, is founder and director of the student players group.

Northwest side cast members are:

Roland F. Bellman, 4418 North Major avenue; Marshall L. Stein, 4605 North Kimball avenue; Matt Merfeld, Palatine, Ill.

-mwm-

from

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Mailed: November 2, 1950
FOR RELEASE: Immediate

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The play will be given at 8 p.m., November 9, 10, and 11, in the Student Union auditorium, 33rd and Federal streets.

Henry W. Knepler, staff English instructor, is founder and director of the student players group.

North side cast members are:

Nathan Mann, 823 Montrose avenue; Robert A. Elliott, 1132 West Lunt avenue.

-mwm-

ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: November 2, 1950
FOR RELEASE: Immediate

CHICAGO -- Ralph Stusrud, 20, son of Mr. and Mrs. O. C. Stusrud of Mayville, will play the leading role in "Room Service," a three-act comedy to be given at Illinois Institute of Technology, Chicago.

Sponsored by the college dramatics group, Campus Players, the comedy will be presented at 8 p.m., November 9, 10, and 11, in the Student Union auditorium.

Stusrud, a senior student at Illinois Tech, is majoring in chemical engineering.

A June 1947 graduate of Mayville high school, he is president of the Campus Players group, is on the staff of Tech News, college weekly newspaper, and the Institute's student directory.

-mwm-

from

ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

Director of Public Relations — James W. Armsey
Day Phones:
Illinois Institute of Technology — CAlumet 5-9600, Ext. 545
Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: November 2, 1950
FOR RELEASE: Photo Memo

Memo to Photo and City Editors:

The queen of Illinois Institute of Technology's Integral ball will be chosen from 25 candidates Saturday evening (November 4) in the Grand ballroom of the Sherman hotel.

Since 2,000 persons are expected to attend, this marks the largest dance in the history of the Institute.

Best picture possibilities will be at 10:30 p.m. during the crowning ceremonies at which band leader Frankie Masters will preside.

Richard Wardell, dance chairman, will be there to assist your photographer if you care to send one.

-- Jim Armsey

from
ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

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Mailed: November 2, 1950
FOR RELEASE: Immediate

CHICAGO -- F. Warren Bickel, technical director of the Diamond Wire and Cable company, has been named project leader of a new rubber research laboratory at Armour Research Foundation of Illinois Institute of Technology.

Bickel's appointment was announced today by Clark E. Thorp, chairman of the Foundation's chemistry and chemical engineering department.

In his new position, Bickel will direct compounding operations and evaluation work with the various rubbers and elastomers. He will work with Dr. Alfred G. Susie, supervisor of rubber and plastics research.

A graduate of Miami University, Oxford, Ohio, Bickel has a B.A. degree in chemistry. He is a member of the American Chemical Society and the Division of Rubber Chemistry. He served on the executive board of the Chicago Rubber Group in 1947.

The new rubber laboratory was made possible by joint donations from industrial sponsors and the Foundation.

Both Bickel and Susie live in Gary, Ind., Bickel at 744 Tyler street and Susie at 3539 East Ninth street.

-whk-

from

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Night Phone:
Lombard 1810-R

Mailed: November 3, 1950
FOR RELEASE: Photo Memo

Memo to Photo and City Editors:

Among the six finalists for queen of Illinois Institute of Technology's annual Integral Ball is an unusual contestant... a voluptuous character with long blonde hair, blue eyes, and a fresh shave. Weighing in at 172 pounds, the contestant stands an even six feet in his argyle socks.

This candidate merited enough student votes, legally too, to rank among the finalists. Rules governing the queen contest require only that a candidate must not be a professional model and must either be a coed or escorted by an Illinois Tech student.

Thus, "Frances" (alias Frank Murray, junior in architecture) meets all requirements and will compete for the traditional queen throne.

Best picture possibilities will be at 10:30 p.m. If you care to send a photographer, dance chairman Richard Wardell will be there to assist him.

-- Jim Armsey

s from
ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

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Night Phone:
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November 6, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- The third annual Chicago Area Career Conference for high schools and junior college students of Chicago and suburbs will be held December 27, 28, and 29 at Illinois Institute of Technology. Sponsors are the Chicago Sun & Times, the Chicago Technical Council, and Illinois Tech.

Scheduled throughout the three days are 200 one-hour counselling sessions on 70 different professions in business, industry, and education. The sessions will cover advantages, disadvantages, and opportunities in each of these professions.

Indorsed by the parochial and the Chicago public school systems, the conference has been designed to supplement, and in no way supplant, the present vocational counselling of the school systems.

Last year's conference was attended by more than 4,000 persons. This year an even larger attendance is expected since the conference will be open to junior college students as well as to high school students.

Guidance sessions will be held on the following careers:

Accounting and auditing, advertising, aeronautical engineering, air-conditioning and refrigeration, architectural engineering, architecture, art (including commercial art), automotive engineering, bacteriology, banking (including investment and finance), biology, business management, chemical engineering.

Chemistry, civil engineering, dancing, dentistry, drafting, dramatics, electrical engineering, electronics (including radio-television engineering), fire protection and safety engineering, food engineering, forestry, gas technology, geology, home economics, industrial engineering,

-more-

Law, library science, mathematics, mechanical engineering, medical technology, medicine, metallurgical engineering, meteorology (weather), mining engineering, modeling, music, nursing, optometry, personnel and labor relations, petroleum engineering, pharmacy, photography, physical education and recreation, physics.

Physiology, police and fire, politics and government, psychology, public relations, radio-television engineering and electronics, secretarial-stenographic, selling and sales promotion, social service, teaching, trades and crafts (building, metal, machine, automotive repair, printing, etc.), veterinary medicine, writing and journalism.

-mwm-

s from

ILLINOIS INSTITUTE OF TECHNOLOGY
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Chicago 16, Illinois

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Night Phone:
Lombard 1810-R

Mailed: November 6, 1950

FOR RELEASE: Immediate

Note to High School Counselor:

A copy of a release for high school newspapers dealing with the third annual Career Conference during the Christmas holidays is attached for your information.

I would appreciate your giving this release to the editor of your school newspaper, who may wish to use it in full or shorten it to fit his space requirements.

-- James W. Armsey
Director of Public Relations
Illinois Institute of Technology

s from

ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

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Lombard 1810-R

Mailed: November 7, 1950
FOR RELEASE: Immediate

CHICAGO -- Contributions of the Institute of Gas Technology to the utility gas industry and the nation's economy were outlined November 2 at the ninth annual meeting of the Institute's board of trustees attended by more than 50 leaders of the industry.

Highlights of the meeting were the dedication of the Institute's new $900,000 building in an address by Frank C. Smith, president of Houston Natural Gas Company and first chairman of the board, the election of officers, and the annual report of Director Elmore S. Pettyjohn.

In his review of the Institute's progress, Pettyjohn reported that:

Institute assets now total $1,350,960, of which $188,819 are current funds, with the balance in restricted funds, installment contracts, plant funds, and properties.

Income for the past year amounted to $378,418, exclusive of the building fund. Of this $105,939 is from dues, contributions, and subscriptions, and $272,479 is income from sponsored research.

The Institute completed and moved into its $900,000 laboratories on the Illinois Institute of Technology campus. Of the more than $500,000 required for the building, $472,708 has been paid or subscribed by 196 gas companies.

"Stress in equipment and research to date," Pettyjohn reported, "has been directed toward increased service by improving products through new or improved processes.

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"The first problems were to accomodate the expansion in the post-war period and the seasonable demand. The former is being accomplished by the extension of transmission mains, and the latter has been and is being overcome by the conversion of oil to substitute natural gas.

"Use of natural gas has permitted a doubling of the thermal carrying capacity of distribution systems, enabling the gas companies to substantially increase their service with only a nominal increase in investment.

"The immediate problem is the increase of service through improvement of distribution systems. A calculator to develop a method for computing pressure drops to locate restrictions and to limit replacement or extensions to a minimum is now being studied."

In his dedication address, Frank C. Smith reviewed the history and accomplishments of the Institute in educating personnel, in fundamental and applied research, in collection and dissemination of scientific information, and in achieving coordination of research within the industry.

"Seventy research projects have been completed by the Institute for member companies and related interests, and 31 projects have been undertaken for the American Gas Association. Of the latter, 21 have been completed and 10 are current, Smith stated. "Twenty basic projects have been sponsored by the Institute itself, 9 of which are in progress.

"To date 76 men, selected graduates of accredited colleges and universities, have received education at the Institute. Two doctor's degrees and 19 master's degrees have been awarded. The student body at present numbers 31.

"The teaching faculty is comprised of 15 full-time and 15 part-time instructors. In addition, there are 22 technical and 19 administrative and non-technical personnel on the staff.

-more-

"The Institute's main activity is in behalf of the gas industry of our country, both in education and research. The beginnings of 1941 have, in these nine years, snowballed to respectable totals, expressed in money, and to a vast volume of scientific research and education, most of which would not have been done had not this institution been created to serve those exact purposes."

Officers reelected were: Frank H. Lerch, Jr., president of Consolidated Natural Gas Company, chairman of the board of trustees, and Raymond J. Spaeth, secretary-treasurer. Dr. Henry T. Heald, president of Illinois Tech, serves as Institute president.

Trustees reelected for an additional three-year term were: Frank H. Adams, president of Surface Combustion Company; Walter C. Beckjord, president of the Cincinnati Gas and Electric Company; Alexander M. Beebee, president of Rochester Gas and Electric Corporation; Thomas Drever, chairman of the board of American Steel Foundries; N. Henry Gellert, president of Seattle Gas Company; John L. Holloway, president of Crane Company; N. C. McGowan, president of United Gas Pipe Line Company; Frank C. Smith; and Harry K. Wrench, president of Minneapolis Gas Company.

James S. Moulton, executive vice president of Pacific Gas and Electric Company, was named to replace H. L. Farrar, president of Coast Counties Gas and Electric Company, whose resignation was accepted.

Two new members of the board's executive committee are: James D. Cunningham, president of Republic Flow Meters Company; and James F. Oates, chairman of the board of People's Gas Light and Coke Company.

Other members of the executive committttee reelected are: Frank H. Adams, Alexander N. Beebee, Thomas Drever, Frank C. Smith, and Wilfred C. Sykes, chairman of the executive committee of Inland Steel Company. Frank H. Lerch, Jr., and Dr. Henry T. Heald complete the executive committee.

-jeg-

from

ILLINOIS INSTITUTE OF TECHNOLOGY

Technology Center
Chicago 16, Illinois

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Night Phone:
Lombard 1810-R

Mailed: November 7, 1950

FOR RELEASE: Immediate

CHICAGO -- A stronger, cheaper, building material that will speed up the installation of walls, roofs, and floors was described today by William T. Savage, supervisor of materials engineering at Armour Research Foundation of Illinois Institute of Technology.

Stress analysis studies at the Foundation show that a new product known as prestressed concrete is more rigid than reinforced concrete and 30 % lighter than poured concrete.

By stringing twenty or more blocks of a concrete aggregate on threaded steel rods, sections up to 30 feet long can be put into place in a matter of minutes. The blocks are compressed by nuts which are tightened on each end of the steel rods by special wrenches.

After the sections have been hoisted into position by a crane, they are welded together by a concrete binder and covered with an inch and a half of poured concrete which forms the finished surface.

"The hollow cores of the aggregate blocks add to the sound-proof and insulating values of the product," Savage pointed out.

Similar preformed parts may be used in future homes, Savage predicted.

"This has already been done in California where whole wall sections have been constructed, taken out to the job, and put in place in less time than would normally be required to pour the wall."

More research may prove that homes can be assembled more economically and still be as well built as the better homes of today, Savage said.

Work at the Foundation is sponsored by the Illinois Brick Company which has been licensed to make the product by the Basalt Rock Company of Napa, California.

-whk-

from
ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: November 8, 1950
FOR RELEASE: Immediate

CHICAGO -- Herbert L. Woolhiser, village manager of Winnetka since 1917, will discuss "The City Manager Plan of Government" at 1 p.m., November 14, before students at Illinois Institute of Technology.

Sponsored by the Institute's chapter of the American Society of Civil Engineers, the lecture will be held in the auditorium of the new metallurgical and chemical engineering building, 33rd and State streets.

-mwm-

from...

ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: November 8, 1950
FOR RELEASE: Immediate

CHICAGO -- Herbert L. Woolhiser, village manager of Winnetka since 1917, will discuss "The City Manager Plan of Government" at 1 p.m., November 14, before students at Illinois Institute of Technology.

Sponsored by the Institute's chapter of the American Society of Civil Engineers, the lecture will be held in the auditorium of the new metallurgical and chemical engineering building, 33rd and State streets.

Woolhiser graduated from the University of Wisconsin and was later on the teaching staff there.

A former consulting engineer, he is a member of the American Institute of Electrical Engineers, Western Society of Engineers, American Water Works Association, and past president and vice president of the International City Managers' Association.

-mwm-

from

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Lombard 1810-R

Mailed: November 8, 1950
FOR RELEASE: Immediate

CHICAGO -- Entry blanks for the 4th annual Illinois Tech Prep Basketball Tournament for Chicago Public High Schools have been distributed, it was announced today by Bernard "Sonny" Weissman, athletic director.

The tournament will be held December 22, 23, and 26 through 30 at the Stockyards International Amphitheatre, 42nd and Halsted streets.

Illinois Tech sponsored its first tournament in 1947 after the University of Chicago discontinued the Holiday meet it had conducted since 1935. Last year 35 teams competed, and at least that many are expected to enter this year's meet.

Marshall high school, whose teams have yet to lose a game while winning the three previous Tech tourneys, will be back to defend its title. Other perennial contenders, Calumet, Senn, and Vocational are again expected to challenge Marshall's bid.

-jeg-

from

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Mailed: November 10, 1950
FOR RELEASE: Immediate

CHICAGO -- Ernest L. Hixson, 35, former English instructor, has been appointed assistant dean of students at Illinois Institute of Technology, it was announced today by Clarence E. Deakins, dean of students.

A graduate of State Teachers' college, California, Pennsylvania, Hixson received a master of letters degree at the University of Pittsburgh. He then studied at Vanderbilt university, Nashville, Tenn.; and Cambridge university, Cambridge, England.

Before joining the Illinois Tech staff in the fall of 1946, he taught at Glassport high school, Glassport, Pa.; Pennington Preparatory school, Pennington, N.J.; and Westtown Preparatory school, Westtown, Pa.

Hixson lives at 2134 North Sedgwick avenue.

-mwm-

ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: November 10, 1950
FOR RELEASE: Immediate

CHICAGO -- Ernest L. Hixson, son of Mr. Earl Hixson of 216 Seventh street, McKeesport, Pennsylvania, has been appointed assistant dean of students at Illinois Institute of Technology, Chicago. He was formerly an English instructor there.

A graduate of State Teachers' college, California, Pennsylvania, Hixson received a master of letters degree at the University of Pittsburgh. He then studied at Vanderbilt university, Nashville, Tenn., and Cambridge university, Cambridge, England.

Before joining the Illinois Tech staff in the fall of 1946, he taught at Glassport high school, Glassport, Pa.; Pennington Preparatory school, Pennington, N.J.; and Westtown Preparatory school, Westtown, Pa.

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Mailed: November 10, 1950
FOR RELEASE: Immediate

CHICAGO -- Raymond D. Meade, former director of the short-lived Korea Technical Institute, will lecture on "Observations in Korea" at 7 p.m., November 14, before members of Rho Epsilon, honorary radio society, at Illinois Institute of Technology.

The talk will be presented during the society's formal initiation banquet at the Terminal restaurant, 2529 North Kedzie avenue.

Meade is director of placement at Illinois Tech.

-mwm-

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The talk will be presented during the society's formal initiation banquet at the Terminal restaurant, 2529 North Kedzie avenue.

Meade is director of placement at Illinois Tech.

Students being initiated that evening are:

Eugene Bensema, 1312 West 73rd place; Leonard Chun, 3300 South Michigan avenue; Mathew F. Einecker, 1519 Henry avenue, Des Plaines; Alfred A. Flowers, 1442 North Washtenaw avenue.

Jesse L. Goldsmith, 4804 Vincennes Avenue; Julius H. Grandelman, 5650 North Kimball avenue; Robert C. Kapoun, 2531 South Euclid avenue, Berwyn; Joseph B. Kroll, 4035 Newport avenue.

Leonard Malinowski, 2114 North Wolcott avenue; Irving Rabowsky, 1215 South Pulaski road; Werner E. Rohr, 5141 West Deming place; Joel S. Wexler, 6733 North Bosworth avenue.

-mwm-

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Mailed: November 10, 1950
FOR RELEASE: Immediate

CHICAGO -- The second exhibition in Illinois Institute of Technology's art series will be held November 15 to December 13 featuring paintings and drawings by Paul Wieghardt and sculpture by Nelli Bar.

Among the works are several never previously shown, and many which have been exhibited in the Chicago Art Institute and principal galleries in New York, Philadelphia, Washington, D.C., St. Paul, and Cambridge, Massachusetts.

Both Miss Bar and Mr. Wieghardt are instructors in life drawing in Illinois Tech's architecture department. A tea will be given at 4 p.m. November 15 by members of the architecture department.

The exhibition and tea will be held in the lobby of the Metallurgical and Chemical Engineering building, 10 West 33rd street.

Subsequent exhibitions will feature work in visual communication by Hans Schleger, oils and watercolors by Marie Blanke, paintings and sculpture by Jean (Hans) Arp, and industrialization of building construction by advanced building research students of the Institute of Design of Illinois Institute of Technology.

-jeg-

from

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Mailed: November 13, 1950
FOR RELEASE: Immediate

CHICAGO -- The fourth annual Illinois Tech Prep Basketball Tournament for Chicago Public High Schools will be held December 23, 26-30 in the Stockyards International Amphitheatre, 42nd and Halsted streets.

Last year 35 of the city's leading high school teams competed in the meet, and at least that many are expected this year.

Eight games will be played in afternoon and evening sessions on each of the first three days. The quarterfinals December 28 will be played with two games in each the afternoon and evening. Semifinal games will be played Friday evening (December 29), with the final and third place games the following afternoon.

Illinois Tech first sponsored the event in 1947 after the University of Chicago discontinued the holiday meet it had conducted since 1935.

The Amphitheatre can be reached by the Stockyards elevated line or the Halsted street car. Parking is available for 8,000 automobiles.

-jeg-

from

ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

Director of Public Relations — James W. Armsey
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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

Mailed: November 13, 1950
FOR RELEASE: Photo Memo

Memo to Photo and City Editors:

The home economics department at Illinois Institute of Technology will sponsor an Open House tea between 3 and 5 p.m., November 14, to celebrate its move from the loop to the south side campus.

During the afternoon, Illinois Tech coeds will be on hand to guide tours of their new quarters.

The tea will be held in room 107 of the Home Economics building, northeast corner of 34th and Federal streets.

Best picture possibilities are between 4:30 and 5 p.m. If you care to send a photographer, Margaret Williams, of the public relations staff, will be there to assist him.

-- Jim Armsey

from

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Mailed: November 15, 1950
FOR RELEASE: Immediate

CHICAGO -- George F. Keck, a leading modernist in architecture, will speak November 16 at a noon luncheon of Illinois Institute of Technology alumni in the club room of the Art Institute.

Keck is recognized internationally for his development of the solar house and for his circular "House of Tomorrow." His lecture is entitled "Interpreting Modern Architecture."

-mwm-

from

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Mailed: November 13, 1950
FOR RELEASE: Immediate

CHICAGO -- Homeowners and industries of southern Minnesota, northeastern Iowa, and southwestern Wisconsin are being assured low-cost and better electrical service in the next five, ten, and twenty years, as a result of studies recently completed.

Electrically speaking, the entire area served by the Interstate Power Company was set up in a single room at Illinois Institute of Technology here, and a team of engineers from Illinois Tech and Interstate Power analyzed problems of design and operation which will affect homeowners in the Dubuque, Clinton, and Decorah, Iowa, Prairie du Chien, Wisconsin, and Albert Lea, Minnesota, areas.

The work was done on Illinois Tech's $100,000 A-C network calculator, an elaborate instrument for simulating power system conditions.

With the network calculator, any power system can be exactly reproduced. Instead of time-consuming mathematics, an electrical engineer can set up, in miniature, a system representing lines extending for hundreds of miles and measure power and voltages at any point under any condition.

Enough circuit elements are available to represent 12 generating stations, 100 transmission lines or transformers, 40 loads, and 18 variable ratio transformers.

The miniature system can be adjusted to simulate any operating condition. From readings, the engineers can immediately determine the effect of additional loads, methods by which they can be carried, system performance under normal or

-more-

emergency conditions, and system changes that can, should, or must be made in the future.

The engineers of the Interstate Power company supplied complete information on the local system; and characteristics of all lines, generators, transformers, loads, and voltages were reduced to calculator values.

The circuits on the calculator were then connected in the same manner as the real equipment and adjusted to have equivalent values. When all conditions were matched, the setup became an exact replica of the Interstate system.

Changes could be made, new lines added, new loads served, new generators put into operation, etc., and accurate immediate measurements were made at all points to show the effects of such changes.

Evrett B. Eggers, electrical engineer at Illinois Tech, in charge of the calculator, is a native of Plainview, Minnesota.

-jeg-

from

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Mailed: November 14, 1950
FOR RELEASE: Immediate

CHICAGO -- Illinois Tech students and alumni will get the complete picture on the Chicago sport scene November 17.

Among the guests at the annual Alumni Father and Son dinner will be Jack Brickhouse, WGN-TV sports director; Pat Flanagan, WENR-TV sportscaster; Chuck Comiskey, White Sox executive vice president; Jim Gallagher, general manager of the Chicago Cubs; and Johnny Lujack and George Connors of the Chicago Bears.

Other speakers will be John Schommer, nationally-known sports official and former athletic director at Illinois Tech, Sonny Weissman, present athletic director and fight referee, and Frank Brilando, Olympic bicycle rider and a Tech student.

The dinner will be at 6:30 p.m. in the gymnasium at 32nd and Dearborn streets.

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s from

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Mailed: November 16, 1950
FOR RELEASE: Immediate

CHICAGO -- An electrically-driven dissecting needle, delicate enough to use in operating on the nervous system of a chick embryo, has been developed by the electrical engineering department at Armour Research Foundation of Illinois Institute of Technology.

The needle will be used to separate the hind-brain of a chick embryo and prevent the development of nerve cells in the heart wall. Scientists will then be able to tell whether certain drugs affect the nervous system or the muscle tissues of the heart.

Conceived by Dr. David S. Jones of the Stritch School of Medicine, Loyola University, the project was carried out under the direction of James L. Murphy, supervisor of electronics at the Foundation, and was sponsored by Dr. Jones through a grant from the National Heart Foundation.

Whether or not the new instrument can be used for similar precise operations on human tissue has not yet been determined and will depend on further studies of the forces and power required.

-whk-

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Mailed: November 20, 1950
FOR RELEASE: Immediate

CHICAGO--Rope, a vital item in Western Hemisphere defense, is drawing five top-flight scientists to Costa Rica.

The five, all from Armour Research Foundation of Illinois Institute of Technology, are Walter J. Armstrong, assistant director of the Foundation's International Division; Norton F. Gurley, research chemist; John D. Keane, chemical engineer; William B. Bobco and Frank MacFall, both research design engineers.

The objectives of the research program, authorized by Congress and undertaken upon request of the Reconstruction Finance Corporation, are to aid in hiking the output of Manila help fiber in Central America by increasing production efficiency and to develop new uses for waste products from the process.

Manila hemp is derived from the abaca plant--a plant related to the one that sprouts bananas. The United States now relies heavily upon the Philippine Islands as a source for this fiber.

The Armour scientists left Chicago November 19 to spend at least two weeks in Costa Rica at plantations operating under United Fruit Company management. Following this initial survey, their technological finds will be put to use in this and other Central American countries.

-bb-

from
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Mailed: November 21, 1950
FOR RELEASE: Advance

ADVANCE FOR RELEASE AFTER 11 A.M. (CST) SATURDAY, NOVEMBER 25, 1950

CHICAGO—Three Illinois Institute of Technology physicists today reported on experiments in which boron was formed by bombarding lithium with alpha particles.

Bert J. Toppel, Atomic Energy Commission pre-doctoral fellow at Illinois Tech, presented a paper explaining the research at the annual winter meeting of the American Physical Society at the University of Chicago.

Toppel said that alpha particles formed from ionized helium gas had entered the lithium nucleus by fusion to form the boron, a hitherto unreported case of transmutation through nuclear reaction.

His paper, "Simple Capture of Alpha Particles," was co-authored by William E. Bennett, professor of physics, and Paul Roys, graduate assistant.

A Van de Graaff generator (a type of atom smasher) was used in the experiments. This machine produces alpha radiation in a single direction equivalent to the radiation produced by 100 grams of radium.

Helium has often been used by physicists to bombard other light metallic elements in cyclotrons, but seldom in Van de Graaff generators. The Illinois Tech experiments and the resulting reactions are believed to be the first of this type recorded.

Bennett said the results have no immediate applied significance, but they do give another clue to the action of nuclei in what is known as an "excited state." Such information is needed to assist theoretical physicists in arriving at a complete theory to explain the interaction between nuclear particles.

-jwa-

s from

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Mailed: November 21, 1950
FOR RELEASE: Anytime

Memo to Editors and Writers:

Background material on the educational, research, and building programs of Illinois Institute of Technology.

The attached material is sent to you as up-to-date background for your files and any other use you care to make of it. It includes:

a. a fact sheet on Illinois Tech

b. a building story

c. an educational story

d. a story on the fire protection and safety engineering curriculum, only one in the nation

e. a story on Dr. Henry Townley Heald, president

f. a story on Ludwig Mies van der Rohe, distinguished head of the Institute's department of architecture and designer of its new modern functional campus

g. a story on the Institute of Design of Illinois Tech

h. a story on the Institute's A-C Network Calculator

Photographs of buildings, and educational and research activities are available on request.

-- Jim Armsey

ILLINOIS INSTITUTE OF TECHNOLOGY

Technology Center
Chicago 16, Illinois

FACT SHEET

Illinois Institute of Technology is one of the nation's top ranking institutions of engineering and scientific education. It is co-educational, and one of the largest colleges of its type in the United States. It has the only evening engineering curriculum leading to a degree in the Chicago metropolitan area.

* * * * *

It was formed in July, 1940, through the merger of Armour Institute of Technology, organized in 1892 by Philip Danforth Armour, and Lewis Institute, founded in 1896 under provisions of the will of Allen C. Lewis.

* * * * *

In its short 10-year history, Illinois Tech has presented an amazing record of growth and achievement.

That record:

	1940	1950
Assets	$5,097,638	$17,090,000
Annual Operating Budget	$1,705,813	$9,550,000
Volume of Research	$608,400	$4,625,000
Enrollment	5,932	8,256

	1940	1950
Land Owned (in acres)	7	85
Land Cleared, Rebuilt, Improved (in acres)	7	67
Usable Square Footage "Under Roof"	273,924	940,767

In addition, it has added eight undergraduate and 13 graduate degree-granting fields of study.

* * * * *

The Institute is headed by 46-year-old Dr. Henry T. Heald, its president, who initially was an assistant professor of civil engineering at Armour Institute in 1927.

Other academic and staff officers are: John T. Rettaliata, vice president and dean of engineering; John Day Larkin, dean of liberal studies; William A. Lewis, dean of the graduate school; Stanton E. Winston, dean of the evening division; Chester A. Arents, assistant dean of engineering and dean of the summer session, and Raymond J. Spaeth, vice president and treasurer.

* * * * *

Like all outstanding technological schools, Illinois Tech strives to equip its students with the education demanded by the specific needs of industry and business. To this end, the Institute has taken the lead in establishing new and unique programs of education wherever necessary to meet these requirements.

* * * * *

In 1903 Armour Institute saw the need for properly trained men in the insurance industry and established the first and only course in Fire Protection and Safety engineering. It instituted a four-year course leading to

a bachelor of science degree, with required courses in general science and liberal arts, as well as fire insurance schedules, hydromechanics, industrial chemistry, fire protection engineering, insurance practices and principles, electricity, industrial safety, property appraisal, production methods, special hazards, and schedule rating.

* * * * *

In 1948 Illinois Tech began the only degree-granting course in food engineering. Purpose of the program is education in procurement, handling, processing, and distribution in the food industry as well as development of new processes and products.

* * * * *

Last year (1949) the world-famous Institute of Design, founded in 1937 by the late Moholy-Nagy and patterned after the renowned Bauhaus in Germany, became a degree-granting department of Illinois Tech. It offers courses in visual design, shelter design, and product design in the belief that art, science, and technology are interlocking and interdependent adjuncts of industrial design.

* * * * *

This fall (1950) the Institute is beginning a program leading to a bachelor of science degree in technical drawing, and becomes the first college or university to offer a degree in this specialized field. The curriculum provides a foundation in engineering fundamentals, and professional training in technical drawing and education.

* * * * *

* * * * *

Illinois Tech offers degrees in architecture and 18 engineering or allied fields: chemical engineering, chemistry, civil engineering, city planning, electrical engineering, fire protection and safety engineering, food engineering, gas technology, industrial engineering, mathematics, mechanical engineering, mechanics, metallurgical engineering, physics, technical drawing, product design, visual communication, and shelter design.

* * * * *

The Institute places more emphasis on the arts and humanities than is common in most technological colleges because Illinois Tech recognizes the increasing social responsibilities of the engineer and scientist. It is the obligation of the institution to develop a well-rounded, thoroughly-integrated citizen, aware of his social and civic obligations as well as those of his profession--hence its extensive Liberal Studies program.

* * * * *

In its Liberal Studies division, Illinois Tech offers degrees in 10 fields: biology, biochemistry, business and economics, bacteriology, home economics, English, political and social sciences, public administration, psychology and education, and language, literature and philosophy.

* * * * *

The college has established and is maintaining a large co-operative program whereby students spend alternate periods in school and at work for a specific company. The co-op program is offered in mechanical engineering, electrical engineering, and food engineering. Also, the

Institute has established off-campus extension programs at Allis-Chalmers in Milwaukee, Caterpillar Tractor in Peoria, and the Argonne National Laboratory of the Atomic Energy Commission.

* * * * *

To further aid in the industrial progress of the nation, Illinois Tech carries on an extensive program of fundamental research which has made possible many achievements of applied research. Two of these projects are investigations of learning ability in the central nervous system, and experimentation in Raman spectroscopy. Other experiments are being conducted in catalysis, chemistry, physics, soil strength measurement, metallurgy, and stress analysis.

* * * * *

Another major phase of Institute service is the Armour Research Foundation of Illinois Institute of Technology, an incorporated, not-for-profit scientific research institution founded in 1936 to provide a confidential research and experimental engineering service to government and industry. It is one of the three largest independent research centers in the country and has conducted over 7,500 research projects for 2,500 companies.

* * * * *

The Institute for Psychological Services is another public service research organization of Illinois Tech. It offers a complete industrial and professional testing service widely used by local industries in determining fitness of applicants for positions and advancements. It also

maintains an adult reading service by which interested persons can improve their rate of reading and comprehension.

* * * * *

The Institute of Gas Technology was established at Illinois Tech in 1941 by 65 associate member companies as a non-profit organization devoted to methods of advancing the technology of the manufactured and natural gas industry through education and research. Its primary objective is to prosecute fundamental and applied research pertinent to the entire gas industry.

* * * * *

Within the past year the Central Research Laboratory of the Association of American Railroads was completed and occupied on the campus. The new laboratory will provide a nerve center for railroad research. It will be the headquarters for engineering, mechanical, and sanitation research, and for studies on refrigerator cars, containers, and other subjects.

* * * * *

To stimulate research and scientific progress throughout the country, the college and Armour Research Foundation have also undertaken the sponsorship of a number of technical conferences, conventions, and symposia with the cooperation of various professional societies. Largest of these are the National Conference on Industrial Hydraulics, Midwest Power Conference, National Electronics Conference, a Thin Films Symposium, an industrial research conference, the Mechanics Colloquium,

Midwest Materials Handling Conference, and National Congress of Applied Mechanics.

* * * * *

Ludwig Mies van der Rohe, one of the great modern architects of our time, and chairman of the Institute's department of architecture, executed the architectural plan for Technology Center of Tomorrow, which represents one of the rare instances in modern times where it has been possible to design on so large a scale.

* * * * *

Present status of the Program is:

Completed and in use:

Metals Research building (1943)

A wing of the Engineering Research building (1945)

Alumni Memorial Hall (1946)

Chemistry building (1947)

Metallurgical and Chemical Engineering building (1948)

2 four-story Resident Halls (1948)
(Farr Hall and Fowler Hall)

1 ten-story elevator apartment building for staff and married students (1949) (Gunsaulus Hall)

Heating Plant and Services building (1949)

Institute of Gas Technology building (1950)

Research Laboratory for Association of American Railroads (1950)

* * * * *

Yet to be built:

Liberal Studies building

Two Research Laboratories for Armour Research Foundation of Illinois Institute of Technology

Library and Administration building

Mechanical Engineering building

Civil Engineering and Mechanics building

Electrical Engineering and Physics building

Student Union and Auditorium

Architecture and Applied Arts building

Gymnasium and Swimming Pool

Field House

8 four-story student dormitories

2 ten-story elevator apartment buildings for staff and married students

3 three-story walk-ups for staff and married students

24 Row Houses for staff

1 Commons building with complete dining facilities

1 Community building with shopping and recreational facilities

November 1950

SLUM CLEARANCE AND REDEVELOPMENT PROGRAM - ILLINOIS INSTITUTE OF TECHNOLOGY

Build a modern engineering college in a slum area?

That's just what trustees of Illinois Institute of Technology are doing.

When Illinois Tech was formed in July, 1940 through the merger of Armour Institute of Technology and Lewis Institute, the board members were faced with the major problem of where to locate the new school.

Both Lewis, founded in 1896 through the provisions of the will of Allen C. Lewis on Chicago's near west side, and Armour, established in 1892 by Philip D. Armour on Chicago's then fashionable near south side, were in slum neighborhoods.

Consideration of the residential source of the student body dictated the need for an easily-accessible, central location. Traveling time of students in the Institute's comprehensive evening division had to be considered. To fulfill its aim of service through research, proximity to business and industrial areas was necessary.

Search for a location narrowed finally to the central south side where the Institute's program was already functioning in the Armour location at 33rd and Federal streets.

There were serious faults with the neighborhood, which had run down to the point where it had become America's largest and worst slum area. Still, for the most part, property deterioration had gone as far as it could.

On the premise that work and wise planning could bring an improvement not only to the immediate area, but to the surrounding locale as well, the trustees made their decision to stand and fight and work for the rejuvenation of the entire area about them.

The original Armour Campus of seven acres was projected to 110. Lay-out of the new campus was done by Ludwig Mies van der Rohe, world-famous head of the Institute's architecture department. It represents one of the few instances in modern times when it is possible to plan on so large a scale.

Of the proposed 110 acres, 85 have been acquired and 67 have been cleared, rebuilt, or converted. The eighteen original buildings, including six fraternity houses, have been expanded to 41, of which 10 are housing units.

Three residence halls (one a ten-story apartment for married students and staff), a central heating plant, and seven classroom and laboratory buildings are new buildings in the modern functional style which characterizes the architectural design of all Technology Center Buildings.

Encouraged by Illinois Tech's results, other groups have followed the Institute's lead. Michael Reese hospital has undertaken an ambitious program of expansion. The New York Life Insurance Company has begun one of the nation's largest privately-financed housing projects, and the Chicago Housing Authority has already completed most of a large low-cost housing project and plans a second in the area.

November 1950

EDUCATIONAL PROGRAM - ILLINOIS INSTITUTE OF TECHNOLOGY

Illinois Institute of Technology, one of the nation's leading colleges of engineering education, has developed a new and somewhat unusual program of preparing its graduates for their professions.

Its curricula has been geared to the specific needs of industry.

Outstanding examples of this program are the fire protection and safety engineering, food engineering, and technical drawing departments. Illinois Tech is the only college or university in the country which offers degrees in these fields.

In each case, Illinois Tech saw a need for a complete and thorough education, based on specific demands of the insurance industry, the food processing industry, and general engineering or educational fields.

Last year (1949) the Institute of Design, founded in 1937 as the New Bauhaus by the late Moholy-Nagy, merged with Illinois Tech and became a degree-granting department. Illinois Tech recognizes the interlocking dependency of art, science, and technology in the fields of visual communication, product design, and shelter design.

The major role in the education of any student is played by his instructors. As often as is possible and practical, Illinois Tech selects its instructors from the ranks of industry. In this way the student gains, not only from the undergraduate and graduate education of the instructor, but the everyday application of these principles to the specific problems of business and industry.

In each field of engineering and scientific study the student is offered in his third year either a research or management option. Under the management option his intensive education in the chosen technical field is augmented by courses in business and economics, psychology, and English.

Illinois Tech differs from most engineering colleges in that, through its extensive liberal arts department, it places more emphasis upon the humanities. It is a major part of the Institute's educational aims that each graduate is aware of his responsibilities not only to his profession but to society.

The college constantly strives to produce well-rounded, thoroughly integrated, socially conscious individuals who through their education, are able to assume the responsibilities demanded of them by society and industry.

November 1950

FIRE PROTECTION AND SAFETY ENGINEERING - ILLINOIS INSTITUTE OF TECHNOLOGY

The only degree-granting fire protection and safety engineering course in the country is offered by Illinois Institute of Technology.

In 1903 officials of Armour Institute of Technology, forerunner of Illinois Tech, saw the need for professionally trained personnel in the insurance business.

Since that time hundreds of graduates of the Illinois Tech department have taken major places in the insurance industry and in industrial safety work.

Graduates of the program have received an intensive education in all phases of insurance and safety. This includes specialized courses in insurance schedules, hydromechanics, thermodynamics, fire protection engineering, insurance practices and principles, industrial safety, property appraisal, special hazards, and schedule rating.

Fundamental courses are required in economics, chemistry, physics, technical drawing, English and composition, mathematics, engineering mechanics, electricity, and heat flow.

In technical courses, the department uses the facilities of the Underwriters Laboratory.

Director of the department is Professor John J. Ahern, one of the leading authorities on the investigation and prevention of fires. In addition to his academic duties, Ahern is a consultant for several major insurance companies and the city of Chicago.

Success of the program is evidenced by the extent of its subsidization by the insurance business. Each year a large number of scholarships are awarded by individual insurance companies.

November 1950

DR. HENRY TOWNLEY HEALD
PRESIDENT OF ILLINOIS INSTITUTE OF TECHNOLOGY

His father was a plant pathologist who taught in several western and southern colleges, so Dr. Henry Townley Heald was early indoctrinated in the demands and limitations of college life.

Although as a boy he thought he might follow in his father's footsteps as a teacher, he was intrigued by the romance of civil engineering, the designing and building of towering structures, bridges, and highways.

At 21, his formal training behind him, Dr. Heald made his first major decision. He tackled the problem of building--first for a railroad, then a city bureau, and finally a private firm.

But he couldn't shake off his innate attachment to education. It kept popping up in his mind, and suddenly it dawned on him that engineering and education might go hand in hand. Out of this realization came his second big decision, one that was to shape the pattern of his own life and carve a niche for him not only in engineering education but in the life of a community.

In 1927 he joined the staff of Chicago's Armour Institute of Technology as an assistant professor of civil engineering. His rise was spectacular. In quick succession he became assistant to the dean, dean of freshmen, dean of the Institute, acting president, and in May 1938, president.

When Armour Tech was merged with Lewis Institute in 1940 to form Illinois Institute of Technology, Dr. Heald became president of the Institute

he has now guided for nearly 10 years during a period of remarkable growth and accomplishment.

Its operating budget has jumped from $1.2 million to $9 million, its assets from $5 million to $17 million, its annual industrial research volume from $400,000 to $4.6 million, its area from 7 acres to 85 acres of a projected 110-acre tract set aside for educational and research buildings and housing units (11 of which have already risen where only a few years ago stood some of the nation's worst slums).

Dr. Heald long ago resolved his early conflict about a career: he is both an educator and an engineer. But he is more. He is a civic leader--in land clearance and urban redevelopment. He is a business man--a director of numerous companies, including a steel foundry, a gas company, a packing firm. He is a spokesman for technological research and development, for private support of education, for industry-education cooperation.

"Industry and education must work compatibly on a two-way street," he says. "If they don't, government will step in and control both."

Education is no ivory tower for him; nor is business a forbidden territory. He has demonstrated they can work together to their mutual advantage, "a free partnership of science, education, and industry," as he terms it.

November 1950

LUDWIG MIES VAN DER ROHE
Director of the Department of Architecture
ILLINOIS INSTITUTE OF TECHNOLOGY

Ludwig Mies van der Rohe, one of the world's foremost modern architects, former director of the Bauhaus in Dessau, has designed the 110-acre campus now under construction at Illinois Institute of Technology.

The 11 completed research, laboratory, and residence buildings of the Institute's proposed 20-odd structures, represents his biggest undertaking in America and, also, marks the first modern American campus ever built as a single, conforming architectural unit.

The 64-year-old German, who emigrated to the United States in 1938 to become director of Illinois Tech's department of architecture, possesses a distinct and unique "Mies" concept of architecture.

"Skin and bones architecture," is how Mies describes his own design. "I have always wanted to express a building as it really is," he says. "I don't want to hide its structure."

Thus, Mies' buildings allow no decoration except that formed by the character and juxtaposition of the structural elements; they are structures of exposed "U" and "I-shaped" steel columns, bare brick panels, and huge rectangularly shaped glass windows.

Ludwig Mies (he later added his mother's surname, van der Rohe) was born in 1886 in the ancient city of Aachen on the border of Germany and the Low Countries. Never having received any formal architectural training, Mies learned the first lesson of building--the placing of stone

on stone--from his father, a master mason and the proprietor of a small stone cutting shop. By actually working with stone, he acquired as a boy what many school-trained architects never learn: a thorough knowledge of the possibilities and limitations of masonry construction.

Mies' world-wide reputation in modern architecture was attained chiefly through seven European projects: the first glass skyscraper, 1919; the second glass skyscraper, 1920-21; a glass-and-concrete office building, 1922; a brick country house, 1923; a concrete country house, 1924; and the Barcelona Pavilion and Tugendhat House in Brno, Czechoslovakia, 1930.

In 1930, Mies was named director of the Bauhaus School, Dessau, at the recommendation of former director, Walter Gropius; in 1931 he was appointed a professor at the Prussian Academy of Arts and Sciences; then in the summer of 1938, he left Germany to head the department of architecture at Illinois Tech; and in 1944, became an American citizen.

Upon his arrival in America, Mies undertook the largest project in his architectural career, that of transforming Illinois Tech's campus into one of the nation's most modern centers of technological education and research.

At Technology Center is the living and constantly growing personification of his modern artistic talents, which are reflected in Mies' own words:

"It is hopeless to try to use the forms of the past in our architecture. It is not possible to move forward and look backwards; he who lives in the past cannot advance. Architecture is the will of an epoch translated

into space; living, changing, new. And not yesterday, not tomorrow, only today can be given form.

November 1950

INSTITUTE OF DESIGN OF ILLINOIS INSTITUTE OF TECHNOLOGY

One of the country's most interesting and unusual college programs is taught at the Institute of Design of Illinois Institute of Technology.

For the excellence of its educational program in relating art, science, and technology to every-day products and presentations, the Institute was recently awarded top honors in competition with leading colleges and schools of art and design at the VII Pan American Congress of Architects in Havana, Cuba.

The Institute was founded in 1937 as the New Bauhaus by the late Lazlo Moholy-Nagy, and embodied the educational principles and philosophies of the Weimar Bauhaus in Germany where its founder was both student and instructor.

Moholy-Nagy, who was known as "a modern well in advance of his times," and as the author of "The New Vision" and "Vision in Motion," died in November, 1946. He was succeeded by the present director, Serge Chermayeff, internationally-famed architect and designer.

The Institute merged with and became a degree-granting department of Illinois Tech in December, 1949.

Education at the Institute is based on the principles that there is no barrier between the applied and fine arts, that useful objects and articles of every-day life can have beauty, and that the task of the designer is to relate contemporary developments in materials, tools, and methods with art in mass-produced goods.

For example, a chair has always been an object on which a person sits. In early days, rough-hewn boards sufficed. Through the years, however, a chair became more than a mere utilitarian object. The many special functions performed by people were slowly reflected in the chair. Thus special chairs were developed for dining, lounging, working (steno chairs, swivel chairs) etc.

Today the chair is still evolving. Scientific studies of posture have pointed changes in design. Recent developments in materials, tubular steels, plastics, foam rubber, plywood, for example, have had their effect on the chair. Television has dictated new changes for greater durability, comfort, and maneuverability.

Modern heating developments have made the radiator a thing of the past. Storage units have eliminated closets. To accomplish such developments at the highest level a close correlation between art, science and technology is demanded.

All students of the Institute, before beginning specialized work in one of the three degree-granting fields of product design, visual design, or photography and film, are required to take the Foundation course in the first three semesters. All the elements which are the components of design are presented. At each stage art, science, and technology form an interlocking pattern.

Throughout the course, the student works with tools, machines, and materials which interact with his theoretical knowledge and artistic sensibility and sensitivity. By working with clay, plastic, wood, paper, sheet metal, glass, he gains a thorough knowledge of the appearance, structure,

texture, and the limitations of each. Step by step, he discovers the possibilities of each.

In establishing a degree-granting department of design, Illinois Tech recognized the increasing need for complete, professional education in this growing field. It saw an awakening which was reducing the lag in application of contemporary art, culture, and materials to machine age products. It foresees the day when the two will proceed apace.

November 1950

A-C NETWORK CALCULATOR AT ILLINOIS INSTITUTE OF TECHNOLOGY

A major Indiana power company was faced with the addition of a huge new industrial consumer. It had to know how to rearrange its generating and transmission systems.

An Iowa power company was planning a new central transmission line. It needed to know what loads the lines must be able to carry 20 years in the future.

A Wisconsin company planned to add a new generating station. It had to know the precise extent of new equipment demanded.

These problems were among those worked out recently on Illinois Institute of Technology's A-C Network Calculator, an elaborate device on which an electrical model of a power system can be quickly made.

Electrically speaking, each entire system is set up, in miniature, in a 30x20 foot room.

As a result of these studies, homeowners and industries are being assured low-cost and improved electrical service, and power companies are making maximum use of their present facilities and saving in additions, improvements, and adjustments.

With the network calculator, any system, ranging from that of a single small industrial plant to a system of several million consumers, can be accurately reproduced.

Instead of time-consuming and often impossible mathematical caluclations, an electrical engineer can set up a system representing transmission

lines extending for hundreds of miles with voltages as high as several hundred thousand volts to transmit power enough to supply even large industrial areas.

These are represented by exactly proportional small quantities which can be safely manipulated, measured, and studied.

The important large generating stations of several interconnecting power companies, operating in several states with connections and substations, can all be represented in one setup of the model.

Enough circuit elements are available to represent 12 generating stations, 100 transmission lines or transformers, 40 loads, and 18 variable ratio transformers.

The miniature system can be adjusted to simulate any operating condition. From the readings, the engineers can immediately determine the effect of additional loads, methods by which they can best be carried, system performance, and system changes that can, should, or must be made at any given time.

In addition to problems of everyday operating conditions, studies can be made of storm or disaster conditions which render generators, lines, or other equipment useless. Best methods of maintaining or restoring service are developed as precautionary measures.

The engineers of the local power company supply complete information on the local system. Characteristics of all lines, generators, transformers, loads, and voltages are reduced to calculator values.

The calculator circuits are then connected exactly as the real equipment and adjusted to have equivalent values. When all conditions are

matched, the setup becomes an exact electrical replica of the actual system.

Changes can be made, new lines added, new loads served, new generators put into operation, transmission points relocated, etc., and accurate, immediate measurements can be made at all points to show the effects of such changes.

The answers, quickly obtained by reading delicate and accurate meters, give more information about the system being studied than can be practically determined by physical measurement or by mathematical equations.

Evrett (correct) B. Eggers, electrical engineer at Illinois Tech, is in charge of the calculator which is contained in 24 cabinets, each 18 inches wide and seven feet high. These are connected to a main metering desk where readings are made. The equipment consists of miles of wiring, over 900 toggle switches, 700 rotary switches, several dozen meters, and over 500 plug cords.

The calculator can also be used in solving complicated problems of mechanical stresses, heat flow, acoustics, gas system analyses,and transient analyses.

November 1950

ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

James W. Armsey, Director

Mailed: November 24, 1950
FOR RELEASE: Immediate

CHICAGO -- Musical clubs of Illinois Institute of Technology will present a noon concert, December 4, at the Caterpillar Tractor company in Peoria.

The 100-man group, consisting of glee club, concert band, and orchestra, is under the direction of O. Gordon Erickson.

Included in the program are the following selections: "The Lord's Prayer" by Malotte, "Fierce was the Wild Billows" by Noble, "Prelude" by Rachmaninoff, "First Swedish Rhapsody" by Leidzen, and the overture "Sakuntala" by Goldmark.

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ILLINOIS INSTITUTE OF TECHNOLOGY
3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: November 24, 1950
FOR RELEASE: Immediate

CHICAGO -- Musical clubs of Illinois Institute of Technology will present a concert at 3 p.m., December 3, at the First Baptist Church in Belvidere.

The 100-man group, consisting of glee club, concert band, and orchestra, is under the direction of O. Gordon Erickson.

Included in the program are the following selections: "The Lord's Prayer" by Malotte, "Fierce was the Wild Billows" by Noble, "Prelude" by Rachmaninoff, "First Swedish Rhapsody" by Leidzen, and the overture "Sakuntala" by Goldmark.

Other engagements on this tour have been scheduled at Rockford, Dixon, and Peoria.

-mwm-

from...
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3300 South Federal Street
Chicago 16, Illinois
CALUMET 5-9600

Public Relations Department
James W. Armsey, Director

Mailed: November 24, 1950
FOR RELEASE: Immediate

CHICAGO -- Musical clubs of Illinois Institute of Technology will present a concert at 7:30 p.m., December 3, at the Second Congregational Church in Rockford.

The 100-man group, consisting of glee club, concert band, and orchestra, is under the direction of O. Gordon Erickson.

Included in the program are the following selections: "The Lord's Prayer" by Malotte, "Fierce was the Wild Billows" by Noble, "Prelude" by Rachmaninoff, "First Swedish Rhapsody" by Leidzen, and the overture "Sakuntala" by Goldmark.

Rockford students appearing in the concert are: Gilbert W. Jensen, 609 Renrose avenue, senior in mechanical engineering; Paul G. Myers, 916 6th street, senior in mechanical engineering; John W. Wilder, 136 Longwood street, senior in electrical engineering; Richard S. Yahrmarkt, 1708 Colorado avenue, senior in mechanical engineering.

-mwm-

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Public Relations Department
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Mailed: November 24, 1950

FOR RELEASE: Photo Memo

Memo to Photo and City Editors:

The annual art auction at the Institute of Design of Illinois Institute of Technology will open with an advance showing of 120 modern works Monday afternoon (November 27) in the Institute auditorium, 632 North Dearborn street.

Works will remain on exhibit until the formal auction sale, December 10.

Picture possibilities include:

1) Four prints by Miss Janet Roosevelt, niece of the late Franklin D. Roosevelt.

2) A portrait of his wife and two other works by the late Moholy Nagy, former director of the Institute of Design and the New Bauhaus in Germany.

3) Works by Hugo Weber and John Walley, prominent Chicago artists.

4) Works by Richard Koppe, designer of the Hotel Sherman's Well of the Sea.

5) Works by Serge Chermayeff, internationally prominent designer and director of the Institute of Design.

The best time for these shots is between 3 and 5 p.m., Monday (November 27). If you care to send a photographer and/or a reporter, Mrs. Margaret Makielski, of the public relations staff, will be there to assist them.

--Jim Armsey

from
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Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
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November 24, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- Modern art enthusiasts, critics, and collectors will enjoy a field day Sunday evening (December 10) when 120 contemporary art pieces take the auction block at the Institute of Design of Illinois Institute of Technology.

Ranging from modern to ultra modern art, the works run the gamut of media. They will include oil and casein paintings, water colors, lithographs, wood cut prints, monoprints, silk screen prints, mobiles, and wire, wood, and plaster sculpture.

Bargain prices are expected to prevail as the art -- much of it by well know artists -- goes under the hammer wielded by TV personality Studs Turkle.

Outstanding among works are those by Miss Janet Roosevelt, niece of Franklin D. Roosevelt; the late Moholy Nagy, former director of the Institute of Design and the New Bauhaus in Germany; Ansel Adams, leading American photographer; Dick Koppe, instructor at the Institute of Design and designer of the Hotel Sherman's Well of the Sea; Hugo Weber, prominent Chicago artist.

However, the majority of works have been done by students and staff of the Institute of Design.

All proceeds will be contributed to the Institute's Moholy-Nagy memorial scholarship fund. Auctions of the past two years have netted 11 one-semester scholarships.

The auction will begin at 7 p.m. and will be held in the Institute auditorium, 632 North Dearborn street. It is free and open to the public.

-mwm-

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Mailed: November 27, 1950
FOR RELEASE: Immediate

CHICAGO -- Paul Rudolph, noted young American architect, will give a lecture November 30 at the Institute of Design of Illinois Institute of Technology on "Current Building VS Industrialization."

Mr. Rudolph was given the 1950 Award of Merit of the American Institute of Architects.

He was born in Kentucky in 1918, and graduated from Alabama Polytechnic Institute in 1940. He studied two years at the Harvard University Graduate School of Design, and then served from 1942 through 1946 as an officer in the United States Navy.

In 1948 he designed an exhibition house for Architectural Forum and Revere Copper Corporation. The following year he was awarded first and second prizes in the Regional House Competition of House and Garden.

The lecture will be held at 8 p.m. in the Institute auditorium at 632 North Dearborn street. It is free and open to the public.

-jeg-

from

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Mailed: November 27, 1950
FOR RELEASE: Immediate

CHICAGO -- During the current semester 12 social fraternities at Illinois Institute of Technology are conducting pledge training for prospective fraternity members.

The pledging period will continue throughout the semester and will end with formal initiation ceremonies and acceptance dinners during the spring of 1951.

Among students pledging fraternities, are the following south siders:

Donald E. Arther, 3154 South Michigan avenue, freshman in electrical engineering, Alpha Sigma Phi; Kwan Yu Chen, 3300 South Michigan avenue, freshman in mechanical engineering, Daedalian; Maurice R. Crain, 3236 South Michigan avenue, freshman in electrical engineering, Alpha Sigma Phi; Thomas J. Connors, 8215 Ingleside avenue, senior in electrical engineering, Daedalian.

Robert C. Davis, 3154 South Michigan avenue, freshman in fire protection and safety engineering, Alpha Sigma Phi; William J. Hansen, 3154 South Michigan avenue, junior in fire protection and safety engineering, Alpha Sigma Phi; Elisha L. Harmon, 3154 South Michigan avenue, freshman in property insurance, Alpha Sigma Phi; Adrian H. Harris, 7711 Kingston avenue, freshman in business and economics, Tau Epsilon Phi.

Dean E. Jensen, 3154 South Michigan avenue, sophomore in mechanical engineering, Alpha Sigma Phi; James E. Kosanke, 8410 Luella avenue, sophomore in civil engineering, Alpha Sigma Phi; Ronald W. Metz, 8354 Paxton avenue, freshman in mechanical engineering, Alpha Sigma Phi.

-more-

Howard J. Rosenfeld, 3254 South Michigan avenue, freshman in architecture, Tau Epsilon Phi; Joseph L. Sellers, 3154 South Michigan avenue, freshman in property insurance, Alpha Sigma Phi; William G. Settloge, 3154 South Michigan avenue, freshman in architecture, Alpha Sigma Phi; David C. Sullivan, 3300 South Michigan avenue, sophomore in fire protection and safety engineering, Daedalian; Robert A. Young, 13111 Escanaba avenue, sophomore in fire protection and safety engineering, Alpha Sigma Phi.

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The following north side students are among those pledging fraternities:

David M. Chapman, 220 E. Huron street, sophomore in mathematics, Alpha Sigma Phi; William E. Eckhardt, 1502 Sunnyside avenue, freshman in electrical engineering, Alpha Sigma Phi; Michael L. Levinthal, 6501 North Bosworth avenue, junior in physics, Sigma Alpha Mu; Paul C. Setze, 222 Linden avenue, Wilmette, freshman in mechanical engineering, Alpha Sigma Phi; William P. Winkler, Jr., 7229 Sheridan road, freshman in biology, Alpha Sigma Phi.

--mwm--

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The following west side students are among those pledging fraternities:

Raymond R. Herber, 7846 W. 45 street, Lyons, freshman in chemical engineering, Daedalian; Larry Shapiro, 1853 South Harding avenue, senior in metallurgical engineering, Tau Epsilon Phi; John E. Zellers, 3145 Wenonah avenue, Berwyn, sophomore in electrical engineering, Alpha Sigma Phi.

-mwm-

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The following northwest siders are among those pledging fraternities:

Paul Doppelt, 5530 North Spaulding avenue, freshman in fire protection and safety engineering, Sigma Alpha Mu; Kenneth C. Hudson, 2332 North Rockwell street, freshman in mechanical engineering, Alpha Sigma Phi; Robert C. Fox, R.R.#1, Bensenville, freshman in electrical engineering, Daedalian; Sheldon B. Ohrenstein, 4811 North Monticello avenue, freshman in electrical engineering, Sigma Alpha Mu; Donald E. Williams, 2835 Logan Blvd., freshman in industrial engineering, Alpha Sigma Phi.

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The following southwest siders are among those pledging fraternities:

Andrew Brudnak, 6554 South Kedvale avenue, senior in mechanical engineering, Daedalian; Francis P. Tobolski, 916 W. 32nd street, freshman in psychology, Alpha Sigma Phi; Ralph G. Zelmer, 4155 South California avenue, freshman in chemical engineering; Daedalian.

-mwm-

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The following out-of-town students are among those pledging fraternities:

Donald E. Arther, 4719 Natural bridge, St. Louis, Mo., freshman in electrical engineering, Alpha Sigma Phi; David Chapman, R.R. #1, Ft. Atkinson, Wis., sophomore in mathematics, Alpha Sigma Phi; Maurice R. Crain, Princeville, Ill., freshman in electrical engineering, Alpha Sigma Phi; Robert C. Davis, 702 South Clay, Litchfield, Ill., freshman in fire protection and safety engineering, Alpha Sigma Phi; Robert C. Fox, R.R. #1, Bensenville, Ill., Daedalian; William J. Hansen, 703 North Barstow street, Eau Claire, Wis., junior in fire protection and safety engineering, Alpha Sigma Phi.

Elisha L. Harmon, 2327 North Monroe street, Monroe, Mich., freshman in property insurance, Alpha Sigma Phi; Raymond R. Herber, 7846 W. 45 street, Lyons, Ill., freshman in chemical engineering, Daedalian; Dean E. Jensen, 3623 - 23 avenue, Moline, Ill., sophomore in mechanical engineering, Alpha Sigma Phi; Howard J. Rosenfeld, 73-09 198 street, Flushing, Long Island, N.Y., freshman in architecture, Tau Epsilon Phi; Joseph L. Sellers, 1806 Edgehill avenue, Nashville, Tenn., freshman in property insurance, Alpha Sigma Phi; William G. Settloge, 70 Briarcliff, Ladue, Mo., freshman in architecture, Alpha Sigma Phi.

-more-

Paul C. Setze, 222 Linden avenue, Wilmette, Ill., freshman in mechanical engineering, Alpha Sigma Phi; David C. Sullivan, 624 North Jameson avenue, Lima, Ohio, sophomore in fire protection and safety engineering, Daedalian; John E. Zellers, 3145 Wenonah avenue, Berwyn, Ill., sophomore in electrical engineering, Alpha Sigma Phi.

-mwm-

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Mailed: November 28, 1950
FOR RELEASE: Immediate

CHICAGO -- Gas Abstracts, published by the Institute of Gas Technology, will enter its seventh year with the January, 1951 issue.

This monthly publication provides busy executives and their staffs with comprehensive digests of all current literature bearing on the gas industry. More than 90 journals are surveyed each month and selected articles are abstracted by specially qualified staff members.

This procedure combines wide coverage of the industry with the quality of abstract attained only by a scientist writing in his own field.

Author and subject indices are prepared annually, so that Gas Abstracts becomes an indexed yearly record of gas industry literature and developments, the only such publication so serving the industry today.

The publication is supplied to the Institute's associate member companies and contributors without charge. It is available to others at a $15 annual subscription fee.

The author and subject indices to Volume 6, 1950, are nearing completion and will be distributed shortly. A limited number of copies of Volume 6 are still available.

-jeg-

from

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Mailed: November 28, 1950
FOR RELEASE: Immediate

CHICAGO -- Thousands of high school and junior college students from Chicag and suburban areas will examine and choose their careers December 27, 28, and 29 during the third annual Chicago Area Career conference at Illinois Institute of Technology.

Counselling by 60 experts in more than 200 fields of business, education, and industry will be offered during the three-day meeting.

Sponsored by the Chicago Sun & Times, the Chicago Technical Council, and Illinois Institute of Technology, the sessions are free and open to all public and parochial high school and junior college students.

The conference has been indorsed and is being supported by school superintendents Herold C. Hunt, Chicago public schools; the Rt. Rev. Msgr. D. F. Cunningham, Roman Cathloic schools, and Edward B. Simon, Cook County schools.

The purpose of the three-day meeting is to acquaint students with various fields of work -- emphasizing requirements, advantages, and disadvantages of each.

Students may register now on entry blanks which have been supplied to guidance counselors in all Chicago and suburban schools.

Last year 5,000 students attended.

-mwm-

from
ILLINOIS INSTITUTE OF TECHNOLOGY
Technology Center
Chicago 16, Illinois

Director of Public Relations — James W. Armsey
Day Phones:
Illinois Institute of Technology — CAlumet 5-9600, Ext. 545
Armour Research Foundation
of Illinois Institute of Technology — CAlumet 5-9600, Ext. 317
Night Phone:
Lombard 1810-R

November 29, 1950

Mailed:

FOR RELEASE: Immediate

CHICAGO -- Fifty outstanding students at Illinois Institute of Technology will be elected to Tau Beta Pi, highest engineering honorary society, at 6 p.m., December 6, at the Western Society of Engineers' building, 84 East Randolph street.

Following initiation ceremonies, a formal banquet will be held in honor of the new members.

Students were selected for membership on the bases of exceptional scholarship.

South side students are:

James L. Bonde, 3210 South Michigan avenue, senior in industrial engineering; Vernon F. Fladeland, 3200 South Michigan avenue, senior in industrial engineering; Robert J. Gressens, 7502 Kingston avenue, senior in electrical engineering; Charles T. Jones, 3140 South Michigan avenue, senior in mechanical engineering; Solomon Hasson, 5493 Greenwood avenue, senior in mechanical engineering; Shengen Hu, 3140 South Michigan avenue, graduate student in chemical engineering.

Robert W. Nordin, 9627 Escanaba avenue, senior in mechanical engineering; William H. Olson, 3200 South Michigan avenue, senior in mechanical engineering; Theodore J. Rigas, 3300 South Michigan avenue, junior in chemical engineering; Evert L. Saxe, 3300 South Michigan avenue, senior in civil engineering; Runolfur Thordarson, 7712 Euclid avenue, senior in chemical engineering; Miguel A. Xavier, 3140 South Michigan avenue, graduate student in electrical engineering.

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Students were selected for membership on the bases of exceptional scholarship.

North side students are:

John M. Menke, 2545 West Coyle street, senior in chemical engineering; Elmer B. Shapiro, 1469 West Carmen avenue, junior in electrical engineering.

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West side students are:

John H. Bonthron, 116 South Elmwood avenue, Oak Park, senior in industrial engineering; Richard E. Daniel, 2415 South 58th avenue, Cicero, senior in electrical engineering; Joseph M. Hartz, 1921 West 23rd street, senior in mechanical engineering; Walter J. Jensen, 2104 South 2nd avenue, Maywood, sophomore in civil engineering; Ray Matousek, 3222 South Michican avenue, senior in civil engineering.

William H. Muttera, Jr., 329 South Homan avenue, senior in chemical engineering; Anton J. Pros, Jr., 2609 South Lombard avenue, Cicero, senior in industrial engineering; Joseph L. Radnik, 6544 West 26th place, Berwyn, senior in electrical engineering; William E. Sindelar, Jr., 1450 South Kedvale avenue, senior in mechanical engineering; Edward A. Sweeney, 4852 West Hubbard street, senior in industrial engineering.

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Northwest side students are:

James E. Batz, 5637 School street, senior in eletrical engineering; Sigmund H. Bielak, 2040 Charleston street, senior in mechanical engineering; Donald F. Frank, 4850 North Rockwell street, senior in industrial engineering; James W. Gewartowski, 2642 North Lawndale avenue, junior in electrical engineering; Clarence J. Maday, 2601 North New England avenue, mechanical engineering; Leonard P. Malinowski, 2114 North Wolcott avenue, senior in electrical engineering.

William H. Mattern, 3822 North Hamlin avenue, senior in fire protection and safety engineering; Arthur J. Rynkus, 4320 School street, senior in electrical engineering and mechanical engineering; Frank B. Sikorski, 4217 West Roscoe street, senior in electrical engineering.

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Following initiation ceremonies, a formal banquet will be held in honor of the new members.

Students were selected for membership on the bases of exceptional scholarship.

Southwest side students are:

Bernard R. Baranski, 3326 South Aberdeen street, senior in mechanical engineering; William J. Brebach, 8643 South Wood street, senior in chemical engineering; Richard C. Curtis, 7733 South Emerald avenue, senior in electrical engineering; Harold J. Gieffers, 6840 South Halsted street, senior in mechanical engineering; Wayne W. Nestander, 1910 West 64th street, senior in civil engineering; Rudy P. Pavletic, 6427 South Hermitage avenue, senior in chemical engineering.

Roy A. Richardson, 849 West 51st place, senior in electrical engineering; Gordon D. Van Erden, 14822 Morgan street, Harvey, senior in chemical engineering; Raymond G. Worobey, 5157 South Kostner avenue, senior in electrical engineering.

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Students were selected for membership on the bases of exceptional scholarship.

Out-of-town students are:

James L. Bonde, 1513 17th avenue, Rockford, senior in industrial engineering; Henry C. Borre, 1932 North 73rd avenue, Elmwood Park, senior in civil engineering; Vernon F. Fladeland, Reynolds, North Dakota, senior in industrial engineering; Charles T. Jones, 1511 5th avenue, Rockford, senior in mechanical engineering; William H. Olson, 1906 South 4th street, Rockford, senior in mechanical engineering; Evert L. Saxe, 410 Sawyer road, Rockford, senior in civil engineering.

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Mailed: November 29, 1950
FOR RELEASE: Immediate

CHICAGO -- Officials for the 4th annual Illinois Tech Prep Basketball Tournament were named today by Bernard "Sonny" Weissman, Techawk athletic director.

Ed Bronson will be head referee for the meet. Other referees named were George Boyle, John Boyle, Joe Freund, Elliott Hasan, Tom Kouzmanoff, and Deszo Roszo.

Grant Stenger was named official timer, and Bob Leiser and Bob McCue were appointed official scorers. Ed Glancy will again be announcer for the games.

The Tournament will be held December 22-23, 26-30 in the Stockyards International Amphitheatre, 42nd and Halsted streets. Last year 35 teams competed in the Holiday event for Chicago Public high schools, and an even larger entry is expected this year.

Deadline for entries is December 4. Pairings will be announced December 16 at an organizational luncheon for coaches, game and tournament officials, and sport writers.

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Mailed: November 29, 1950
FOR RELEASE: Immediate

CHICAGO -- John J. Schommer, former athletic director and professor emeritus of Illinois Institute of Technology, and Earl C. Kubicek, alumni director, will address the Illinois Tech Indianapolis alumni club at a dinner meeting at 6:30 p.m., December 4 in the Riley hotel.

Marshall R. Beal, 4221 Guilford, is president of the club, and reservations may be made through him.

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Mailed: November 30, 1950
FOR RELEASE: Immediate

CHICAGO -- Clarence E. Deakins, dean of students at Illinois Institute of Technology, and Earl C. Kubicek, alumni director, will address members of the Illinois Tech Cincinnati alumni club at a dinner meeting at 6:30 p.m., December 5 in the Hotel Gibson.

Hoyt M. Hammer, 3126 Daytona, state agent of the Fidelity and Guaranty Insurance corporation, is president of the Cincinnati club, and is handling reservations for the dinner.

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Mailed: November 30, 1950
FOR RELEASE: Immediate

CHICAGO -- Applications for 15 fellowships leading to both master's and doctor's degrees in gas technology are being accepted by the Institute of Gas Technology.

The fellowships provide an award of $1,250 and tuition for the first two years. The renumeration is tax free. Additionally, the fellows are employed during the summer months by a sponsoring company.

Applications may be made by seniors and graduates in chemistry, chemical engineering, mechanical engineering, petroleum engineering, and related fields.

All applications and requests for information should be addressed to The Director, Institute of Gas Technology, Chicago 16, Illinois.

The Institute, affiliated with Illinois Institute of Technology, was founded in 1941 by the utility gas industry as an independent, non-profit research and educational corporation. Primary purposes are to educate young men at the graduate level for the industry, conduct fundamental and applied research for the industry, collect and disseminate scientific information to the gas industry, and stimulate and coordinate research within the industry.

-jeg-

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Mailed: November 30, 1950
FOR RELEASE: Immediate

CHICAGO -- Applications for 15 fellowships leading to degrees of master of gas technology and doctor of philosophy are being accepted by the Institute of Gas Technology.

The fellowships provide an award of $1,250 and tuition for each of the first two years. This renumeration is tax free. Additionally, summer employment is provided with sponsoring companies to give fellows the advantages of practical field work and additional income.

Applications may be made by seniors and graduates of accredited colleges and universities in chemistry, chemical engineering, mechanical engineering, petroleum engineering, or related fields.

All applications and requests for information should be addressed to The Director, Institute of Gas Technology, Technology Center, Chicago 16, Illinois, and must be submitted before March 15, 1951.

Applicants must rank in the upper fifth of their class and must be American citizens under 28 years of age who have shown adaptability, cooperation, and high moral character.

Candidates for master's degrees will be required to complete courses in production, distribution and utilization of manufactured and natural gas, business organization, labor relations, and public utility regulation. Additional requirements are selected courses in chemistry, physics, mathematics, and chemical or mechanical engineering, two summer employment periods, and a thesis in gas technology.

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Gas companies throughout the country cooperate with the Institute's educational program by providing summer employment for students. Students are usually able to obtain industrial experience in any section of the country desired.

Graduating fellows are aided in obtaining employment by distribution of brochures containing personal and academic data, pictures, and statements on location and work preference. The Institute assumes the responsibility of aiding its graduates to find the best employment possible.

The Institute of Gas Technology was established in 1941 by a group of gas industry executives as an independent non-profit research and educational corporation.

Its prime purposes are to serve directly the nation's utility gas industry by educating promising young men at the graduate level specifically for the gas industry, by prosecuting fundamental and applied research for the gas industry, by collecting and disseminating scientific information to the gas industry, and by stimulating and correlating research within the industry.

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